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The Astr. Royal
Royal Obs. - Greenwich

FUNDAMENTAL CATALOGUE

OF

1293 STARS

FOR THE EQUINOX

1900

FROM OBSERVATIONS MADE AT THE

ROYAL OBSERVATORY, CAPE OF GOOD HOPE,

DURING THE YEARS

1905 - 1911:

UNDER THE DIRECTION OF

SIR DAVID GILL, K.C.B., LL.D., D.SC., F.R.S., HON. F.R.S.ED., &c.,

FORMERLY HIS MAJESTY'S ASTRONOMER,

AND

S. S. HOUGH, M.A., F.R.S.,

HIS MAJESTY'S ASTRONOMER AT THE CAPE.

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CAPE FUNDAMENTAL CATALOGUE, 1900.

INTRODUCTION.

This Catalogue is based on meridian observations of stars made with the new reversible transit circle from the year 1905, when the instrument was first brought into regular use, to the end of the year 1911. Details of the observations, together with a full account of the methods of reduction, will be published in the volumes of *Cape Meridian Observations* covering the same period which are now being passed through the press. A full description of the instrument itself is contained in the *History and Description of the Cape Observatory*, to which reference may be made for detailed particulars. It is thus only necessary here to give an account of the processes employed for the formation of the Catalogue subsequently to the collection of separate results contained in the ledgers.

I.—Revision of Clock-Star System.

The entries in the ledgers, as contained in the *Cape Meridian Observations*, depend on Clock Errors derived with Newcomb's places for the standard clock stars. The observed Right Ascensions of the clock stars themselves were only retained as determinations and transferred to the ledgers in cases where at least five such were observed within a watch, which generally did not exceed four hours in duration. Thus, though the individual star places obtained by combining the separate results will not accurately conform with those of Newcomb's Catalogue, it may be anticipated that the combination will reproduce in entirety any systematic errors of Right Ascension of Newcomb's Catalogue dependent on the Right Ascension itself, except such as involve fluctuations contained within narrow limits of Right Ascension. The latter will be to a large extent smoothed out in the process of combination.

Observations have been made in four different conditions of the instrument, distinguished as I. E., I. W., II. E., II. W. The symbols I. II. refer to the relative positions of the object glass and eye-end, I. denoting that the object glass is adjacent to the reading 0° on the fixed circle, and II. that it is adjacent to the reading 180°. The symbols E. and W. (East and West) refer to the position of the Clamp. Observations in position I. were made in the years 1906, 1907, 1909, 1910, 1911, and those in position II. in the years 1905, 1908, 1910.

The entries in the ledgers were all obtained by referring the results of the separate observations to the epoch and equinox 1900 with Newcomb's proper motions. The means of the derived right ascensions of the clock stars dependent on the four different conditions of the instrument, together with their combination derived by taking the simple mean of the four without weighting, are contained in the following Table :—

TABLE I.—*Right Ascensions of Clock Stars derived from Cape Ledgers.*

Star.	Dec. 1900.	Right Ascension 1900·0.					Corr. to Newcomb.
		I. E.	I. W.	II. E.	II. W.	Mean.	
	° ′	h m s	s	s	s	s	s
γ Pegasi	+14 38	0 8 5·116	5·112	5·110	5·105	5·111	− ·024
ι Ceti	− 9 23	14 19·970	19·990	19·973	19·988	19·980	− ·008
44 Piscium	+ 1 23	20 16·578	16·550	16·565	16·547	16·560	− ·016
12 Ceti	− 4 31	24 56·118	56·121	56·114	56·130	56·121	− ·019
13 Ceti	− 4 9	30 6·034	6·033	6·054	6·070	6·048	+ ·012
Lacaille 147	−25 19	32 12·551	12·551	12·526	12·525	12·538	+ ·067
β Ceti	−18 32	38 34·226	34·228	34·222	34·218	34·224	− ·002
ζ Andromedæ	+23 43	42 2·178	2·180	2·160	2·142	2·165	− ·030
δ Piscium	+ 7 2	43 29·614	29·590	29·610	29·578	29·598	− ·010
20 Ceti	− 1 41	47 53·835	53·818	53·811	53·813	53·819	+ ·031
ε Piscium	+ 7 21	57 45·130	45·154	45·146	45·122	45·138	− ·011
η Ceti	−10 43	1 3 33·580	33·563	33·546	33·565	33·564	−0·001
ζ Piscium *pr.*	+ 7 3	8 30·342	30·336	30·330	30·387	30·349	− ·016
θ Ceti	− 8 42	19 1·498	1·482	1·477	1·502	1·490	+ ·006
η Piscium	+14 50	26 7·865	7·860	7·848	7·860	7·858	+ ·006
ν Piscium	+ 4 59	36 13·580	13·567	13·567	13·563	13·569	− ·023
τ Ceti	−16 28	39 25·340	25·328	25·345	25·341	25·339	+ ·015
ο Piscium	+ 8 39	40 6·720	6·707	6·716	6·730	6·718	− ·006
ζ Ceti	−10 50	46 31·465	31·460	31·462	31·470	31·464	− ·001
ξ Piscium	+ 2 42	48 22·685	22·670	22·697	22·653	22·676	+ ·008
β Arietis	+20 19	49 6·846	6·858	6·855	6·850	6·852	+ ·016
υ Ceti	−21 34	55 17·598	17·608	17·612	17·620	17·610	+ ·031
α Arietis	+22 59	2 1 32·044	32·050	32·043	32·057	32·049	− ·009
ξ^1 Ceti	+ 8 23	7 41·923	41·906	41·914	41·930	41·918	+ ·003
67 Ceti	− 6 53	11 59·710	59·736	59·725	59·733	59·726	+ ·028
ο Ceti	− 3 26	14 17·637	17·624	17·653	17·650	17·641	− ·021
ξ^2 Ceti	+ 8 1	22 50·450	50·458	50·455	50·475	50·460	− ·001
ν Ceti	+ 5 9	30 37·548	37·542	37·505	37·530	37·531	+ ·020
ν Arietis	+21 32	33 8·123	8·173	8·145	8·154	8·149	− ·046
δ Ceti	− 0 6	34 21·345	21·345	21·355	21·345	21·348	− ·025
γ Ceti *seq.*	+ 2 49	38 7·150	7·076	7·093	7·140	7·115	+ ·029
π Ceti	−14 17	39 21·785	21·785	21·815	21·793	21·795	+ ·036
μ Ceti	+ 9 42	39 32·100	32·082	32·123	32·114	32·105	+ ·007
σ Arietis	+14 40	45 58·218	58·198	58·186	58·194	58·199	− ·009
τ^2 Eridani	−21 25	46 30·151	30·166	30·125	30·144	30·147	+ ·052
η Eridani	− 9 18	51 32·498	32·501	32·506	32·505	32·503	− ·018
α Ceti	+ 3 42	57 3·092	3·078	3·100	3·070	3·085	+ ·016
δ Arietis	+19 21	3 5 54·540	54·555	54·560	54·538	54·548	− ·015

Star.	Dec. 1900.	Right Ascension 1900·0.					Corr. to Newcomb.
		I. E.	I. W.	II. E.	II. W.	Mean.	
	° ′	h m s	s	s	s	s	s
τ Arietis	+20 47	3 15 27·151	27·128	27·090	27·110	27·120	− ·019
ο Tauri	+ 8 41	19 25·855	25·830	25·848	25·853	25·847	+ ·003
ξ Tauri	+ 9 23	21 44·917	44·903	44·916	44·910	44·912	− ·006
f Tauri	+12 36	25 21·074	21·036	21·048	21·042	21·050	− ·015
ε Eridani	− 9 48	28 13·106	13·150	13·124	13·138	13·130	+ ·011
τ^5 Eridani	−21 58	29 22·232	22·210	22·233	22·273	22·237	+ ·053
δ Eridani	−10 6	38 27·434	27·460	27·420	27·430	27·436	− ·024
η Tauri	+23 48	41 32·301	32·315	32·288	32·318	32·306	− ·009
τ^6 Eridani	−23 33	42 32·728	32·704	32·738	32·753	32·731	+ ·004
γ Eridani	−13 48	53 21·808	21·811	21·822	21·833	21·819	− ·002
λ Tauri	+12 12	55 8·354	8·347	8·320	8·346	8·342	− ·007
ν Tauri	+ 5 43	57 50·180	50·163	50·182	50·143	50·167	·000
A Tauri	+21 49	58 46·883	46·930	46·908	46·886	46·902	−0·018
43 Tauri	+19 21	4 3 20·364	20·342	20·330	20·328	20·341	− ·009
o^2 Eridani	− 7 49	10 40·158	40·162	40·185	40·165	40·168	+ ·008
γ Tauri	+15 23	14 6·072	6·095	6·095	6·078	6·085	− ·008
δ Tauri	+17 18	17 10·006	10·017	10·006	9·993	10·006	+ ·005
ε Tauri	+18 58	22 46·563	46·558	46·562	46·550	46·558	− ·029
ν Eridani	− 3 33	31 19·308	19·310	19·339	19·330	19·322	+ ·012
53 Eridani	−14 30	33 36·040	36·033	36·053	36·062	36·047	+ ·070
τ Tauri	+22 46	36 14·529	14·517	14·493	14·492	14·508	− ·021
μ Eridani	− 3 26	40 30·112	30·119	30·125	30·110	30·117	− ·001
π^3 Orionis	+ 6 47	44 24·684	24·682	24·685	24·628	24·670	+ ·017
π^5 Orionis	+ 2 17	49 2·519	2·533	2·524	2·543	2·530	+ ·003
ι Tauri	+21 27	57 7·057	7·035	7·042	7·038	7·043	− ·034
ε Leporis	−22 30	5 1 13·647	13·656	13·650	13·660	13·653	− ·009
β Eridani	− 5 13	2 55·988	55·996	55·998	56·028	56·003	− ·013
μ Leporis	−16 19	8 26·354	26·371	26·325	26·343	26·348	− ·019
ο Orionis	− 0 29	16 39·433	39·421	39·433	39·441	39·432	+ ·027
δ Orionis	− 0 22	26 53·873	53·844	53·865	53·870	53·863	+ ·014
α Leporis	−17 54	28 19·174	19·174	19·200	19·160	19·177	− ·006
ι Orionis	− 5 59	30 32·468	32·494	32·454	32·480	32·474	− ·007
ζ Tauri	+21 5	31 40·070	40·058	40·080	40·065	40·068	− ·014
ζ Leporis	−14 52	42 25·455	25·456	25·450	25·449	25·453	+ ·010
κ Orionis	− 9 42	43 0·836	0·830	0·830	0·826	0·831	+ ·005
1 Geminorum	+23 16	58 2·477	2·486	2·458	2·500	2·480	− ·020
ν Orionis	+14 47	6 1 51·726	51·732	51·755	51·730	51·736	− ·027
η Geminor. *seq.*	+22 32	8 50·472	50·467	50·488	50·443	50·468	− ·045

TABLE I.—*continued.*

Star.	Dec. 1900.	Right Ascension 1900·0. I. E.	I. W.	II. E.	II. W.	Mean.	Corr. to New-Comb.
	° ′	h m s	s	s	s	s	s
μ Geminorum......	+22 34	6 16 54·630	54·660	54·643	54·653	54·647	− ·016
β Canis Majoris...	−17 54	18 17·773	17·745	17·710	17·733	17·740	− ·010
8 Monocerotis.....	+ 4 39	18 28·150	28·156	28·160	28·145	28·153	− ·009
10 Monocerotis....	− 4 42	23 1·275	1·276	1·270	1·306	1·282	− ·047
ν Geminorum......	+20 17	23 1·560	1·525	1·528	1·535	1·537	+ ·003
ξ Canis Majoris...	−22 53	30 51·903	51·879	51·884	51·901	51·892	− ·028
15 Monocerotis ...	+ 9 59	35 28·279	28·269	28·280	28·273	28·275	+ ·011
ξ Geminorum......	+13 0	39 40·677	40·624	40·598	40·652	40·638	+ ·007
18 Monocerotis ...	+ 2 31	42 38·824	38·800	38·798	38·803	38·806	+ ·021
θ Canis Majoris...	−11 55	49 32·638	32·647	32·655	32·657	32·649	− ·004
γ Canis Majoris...	−15 29	59 14·074	14·041	14·064	14·070	14·062	− ·007
51 Geminorum....	+16 20	7 7 37·760	37·767	37·770	37·720	37·754	− ·041
λ Geminorum......	+16 43	12 20·795	20·805	20·806	20·809	20·804	− ·007
δ Geminor. *seq.* ...	+22 10	14 9·078	9·079	9·066	9·070	9·073	− ·034
β Canis Minoris...	+ 8 29	21 43·705	43·690	43·680	43·715	43·698	− ·004
25 Monocerotis ...	− 3 53	32 18·416	18·400	18·388	18·406	18·403	+ ·034
26 Monocerotis ...	− 9 19	36 28·188	28·194	28·207	28·211	28·200	+ ·053
κ Geminor. *seq.*...	+24 38	38 24·688	24·698	24·690	24·684	24·690	− ·022
ξ Argûs *seq.*	−24 37	45 5·326	5·316	5·332	5·329	5·326	+ ·008
9 Puppis *m*........	−13 38	47 8·492	8·484	8·480	8·453	8·477	− ·009
ρ Argûs............	−24 1	8 3 17·118	17·127	17·134	17·164	17·136	+ ·027
20 Puppis..........	−15 29	8 44·185	44·197	44·200	44·201	44·196	+ ·010
β Cancri............	− 9 30	11 5·587	5·581	5·584	5·547	5·575	+ ·014
Bradley 1197......	− 3 35	20 39·843	39·873	39·880	39·853	39·862	− ·009
η Cancri...........	+20 47	26 55·613	55·629	55·590	55·613	55·611	− ·019
δ Hydræ...........	+ 6 3	32 21·777	21·793	21·768	21·793	21·783	− ·001
δ Cancri......	+18 31	39 0·195	0·220	0·207	0·210	0·208	+ ·001
ε Hydræ AB.	+ 6 47	41 28·863	28·886	28·862	28·872	28·871	− ·006
14 Hydræ	− 3 4	44 20·243	20·243	20·241	20·248	20·244	− ·027
ζ Hydræ............	+ 6 20	50 6·528	6·491	6·473	6·511	6·501	− ·029
α Cancri...........	+12 15	53 1·124	1·140	1·110	1·112	1·122	− ·023
κ Cancri............	+11 4	9 2 19·924	19·899	19·902	19·915	19·910	− ·008
θ Hydræ...........	+ 2 44	9 9·760	9·730	9·754	9·752	9·749	− ·003
83 Cancri..	+18 8	13 24·103	24·068	24·098	24·070	24·085	− ·021
α Hydræ...........	− 8 14	22 40·433	40·438	40·445	40·443	40·440	+ ·018
ξ Leonis	+11 45	26 33·426	33·415	33·438	33·403	33·421	+ ·013
ι Hydræ............	−13 53	35 30·750	30·762	30·773	30·750	30·759	+ ·047
κ Hydræ...........	+10 21	35 48·878	48·873	48·906	48·873	48·883	+ ·008
6 Sextantis	− 3 46	46 11·719	11·704	11·716	11·710	11·712	− ·005
π Leonis............	+ 8 31	54 55·796	55·784	55·767	55·817	55·791	+ ·008
η Leonis............	+17 15	10 1 52·918	52·936	52·898	52·906	52·915	+ ·069
λ Hydræ	−11 52	5 42·773	42·783	42·774	42·795	42·781	− ·005
22 Sextantis.......	− 7 34	12 39·675	39·668	39·693	39·664	39·675	− ·002
μ Hydræ	−16 20	21 15·236	15·214	15·244	15·250	15·236	+ ·004
ρ Leonis............	+ 9 49	27 32·803	32·799	32·767	32·776	32·786	− ·017
33 Sextantis.......	− 1 13	36 18·988	18·993	18·965	18·985	18·983	+ ·031
34 Sextantis.......	+ 4 6	37 27·668	27·705	27·698	27·703	27·696	− ·001
l Leonis............	+11 4	44 0·112	0·092	0·100	0·076	0·095	− ·023

Star.	Dec. 1900.	Right Ascension 1900·0. I. E.	I. W.	II. E.	II. W.	Mean.	Corr. to New-Comb.
	° ′	h m s	s	s	s	s	s
ν Hydræ............	−15 40	10 44 41·416	41·440	41·433	41·448	41·434	+ ·027
d Leonis............	+ 4 9	55 23·807	23·800	23·788	23·824	23·805	+ ·015
χ Leonis............	+ 7 53	59 51·560	51·550	51·586	51·580	51·569	+ ·004
β Crateris..........	−22 17	11 6 44·324	44·345	44·334	44·356	44·340	+ ·015
δ Leonis............	+21 4	8 47·453	47·445	47·458	47·440	47·449	− ·041
θ Leonis............	+15 59	8 59·605	59·605	59·613	59·628	59·613	+ ·022
δ Crateris	−14 14	14 20·420	20·443	20·445	20·442	20·438	+ ·011
σ Leonis......... ..	+ 6 35	15 58·823	58·822	58·830	58·833	58·827	− ·014
τ Leonis............	+ 3 24	22 47·703	47·702	47·683	47·704	47·698	+ ·002
υ Leonis............	− 0 16	31 49·721	49·719	49·736	49·740	49·729	+ ·004
β Leonis............	+15 8	43 57·560	57·562	57·576	57·590	57·572	− ·012
β Virginis.........	+ 2 20	45 29·189	29·183	29·182	29·203	29·189	+ ·006
π Virginis........ .	+ 7 10	55 44·926	44·966	44·930	44·945	44·942	+ ·026
ο Virginis..........	+ 9 17	12 0 6·939	6·917	6·931	6·931	6·930	− ·005
ε Corvi..............	−22 4	4 58·843	58·842	58·849	58·860	58·849	+ ·007
η Virginis..........	− 0 7	14 47·361	47·357	47·374	47·363	47·364	− ·028
δ Corvi *seq*	−15 58	24 41·320	41·323	41·350	41·311	41·326	− ·032
20 Comæ...........	+21 27	24 41·840	41·803	41·814	41·830	41·822	− ·075
β Corvi..............	−22 51	29 7·977	8·010	7·996	7·986	7·992	+ ·041
24 Comæ *seq.*.....	+18 56	30 6·853	6·832	6·836	6·820	6·835	− ·008
ρ Virginis..........	+10 47	36 49·398	49·383	49·378	49·391	49·388	− ·026
δ Virginis..........	+ 3 56	50 33·980	33·969	33·962	33·950	33·965	+ ·007
ε Virginis..........	+11 30	57 11·944	11·928	11·930	11·938	11·935	− ·008
θ Virginis..........	− 5 0	13 4 46·294	46·297	46·303	46·317	46·303	+ ·014
γ Hydræ............	−22 39	13 29·031	29·038	29·052	29·050	29·043	+ ·027
i Virginis	−12 11	21 26·126	26·147	26·131	26·116	26·130	+ ·013
ζ Virginis..........	− 0 5	29 35·838	35·811	35·821	35·823	35·823	+0·008
m Virginis.........	− 8 12	36 21·772	21·737	21·776	21·758	21·761	+ ·017
τ Boötis	+17 57	42 30·616	30·605	30·596	30·588	30·601	− ·005
89 Virginis	−17 38	44 26·187	26·206	26·233	26·209	26·209	+ ·023
η Boötis	+18 54	49 55·383	55·366	55·387	55·406	55·386	− ·017
τ Virginis..........	+ 2 [illegible]	56 33·406	33·390	33·384	33·373	33·388	− ·015
94 Virginis	− 8 25	14 0 59·983	59·980	59·978	59·994	59·984	+ ·007
κ Virginis..........	− 9 49	7 33·607	33·605	33·630	33·613	33·614	− ·009
ι Virginis...........	− 5 31	10 46·196	46·198	46·208	46·172	46·194	+ ·012
λ Virginis.	−12 55	13 41·842	41·847	41·873	41·867	41·857	+ ·023
f Boötis	+19 41	21 48·268	48·252	48·225	48·256	48·250	− ·022
ζ Boötis *m*	+14 9	36 22·360	22·354	22·338	22·378	22·358	− ·047
μ Virginis..........	− 5 13	37 47·348	47·342	47·352	47·372	47·354	− ·011
109 Virginis	+ 2 19	41 11·552	11·554	11·550	11·522	11·545	− ·020
α Libræ	−15 38	45 20·691	20·704	20·688	20·723	20·702	+ ·011
15 Libræ	−11 0	51 20·450	20·463	20·438	20·445	20·449	+ ·012
Piazzi XIV. 221..	+14 51	51 30·002	30·024	29·987	29·980	29·998	+ ·006
ι Libræ..............	−19 25	15 6 31·167	31·180	31·201	31·170	31·180	+ ·009
β Libræ.............	− 9 1	11 37·472	37·482	37·482	37·490	37·482	− ·002
30 Libræ	−14 47	17 27·037	27·059	27·083	27·040	27·055	+ ·001
32 Libræ	−16 22	22 36·922	36·914	36·928	36·920	36·921	− ·011
γ Libræ.............	−14 27	29 55·842	55·853	55·870	55·854	55·855	− ·026

TABLE I.—*continued.*

Star.	Dec. 1900.	Right Ascension 1900·0. I. E.	I. W.	II. E.	II. W.	Mean.	Corr. to New-Comb.
	° ′	h m s	s	s	s	s	s
α Serpentis	+ 6 44	15 39 20·502	20·510	20·515	20·493	20·505	− ·002
β Serpentis	+15 44	41 34·288	34·314	34·310	34·294	34·302	− ·052
κ Serpentis	+18 27	44 14·278	14·254	14·268	14·252	14·263	− ·013
μ Serpentis	− 3 7	44 24·039	24·044	24·032	24·035	24·038	+ ·005
ε Serpentis	+ 4 47	45 49·820	49·804	49·804	49·838	49·817	− ·013
γ Serpentis	+15 59	51 49·990	49·992	49·994	50·002	49·995	− ·033
δ Scorpii	−22 20	54 25·144	25·137	25·144	25·141	25·142	+ ·012
β Scorpii *pr.*	−19 32	59 37·254	37·290	37·263	37·279	37·272	+ ·036
δ Ophiuchi	− 3 26	16 9 6·273	6·265	6·250	6·258	6·262	+ ·002
ε Ophiuchi	− 4 27	13 1·775	1·749	1·752	1·763	1·760	+ ·002
γ Herculis	+19 23	17 30·477	30·493	30·506	30·496	30·493	− ·015
λ Ophiuchi *m*	+ 2 12	25 52·198	52·158	52·146	52·168	52·168	+ ·013
β Herculis	+21 42	25 55·212	55·240	55·255	55·208	55·229	+ ·010
ζ Ophiuchi	−10 22	31 39·078	39·086	39·090	39·102	39·089	− ·001
49 Herculis	+15 9	47 31·654	31·637	31·649	31·657	31·649	− ·025
κ Ophiuchi	+ 9 32	52 56·064	56·052	56·070	56·058	56·061	− ·009
η Ophiuchi *m*	−15 36	17 4 38·554	38·558	38·540	38·560	38·553	+ ·032
δ Herculis	+24 57	10 55·417	55·428	55·393	55·365	55·401	− ·025
θ Ophiuchi	−24 54	15 52·049	52·060	52·038	52·048	52·049	+ ·010
d Ophiuchi	−29 47	20 58·080	58·102	58·084	58·080	58·087	+ ·071
σ Ophiuchi	+ 4 14	21 33·157	33·152	33·138	33·158	33·151	− ·020
α Ophiuchi	+12 38	30 17·552	17·553	17·532	17·530	17·542	+ ·005
ξ Serpentis	−15 20	31 51·602	51·618	51·612	51·610	51·611	+ ·024
β Ophiuchi	+ 4 37	38 31·944	31·934	31·932	31·932	31·936	− ·011
ν Ophiuchi	− 9 46	53 31·284	31·272	31·265	31·266	31·272	+ ·007
67 Ophiuchi	+ 2 56	55 38·196	38·170	38·170	38·168	38·176	− ·045
72 Ophiuchi	+ 9 33	18 2 36·533	36·520	36·516	36·538	36·527	+ ·013
μ Sagittarii	−21 5	7 46·985	46·982	46·988	46·980	46·984	+ ·019
η Serpentis	− 2 55	16 8·130	8·132	8·130	8·128	8·130	+0·028
109 Herculis	+21 43	19 26·163	26·190	26·165	26·193	26·178	− ·015
λ Sagittarii	−25 29	21 47·966	47·967	47·948	47·980	47·965	+ ·001
Scuti 4 *H*	− 9 9	36 47·909	47·904	47·912	47·923	47·912	− ·032
φ Sagittarii	−27 6	39 24·552	24·564	24·554	24·578	24·562	+ ·031
110 Herculis	+20 27	41 21·448	21·478	21·483	21·443	21·463	+ ·006
θ Serpentis *pr.*	+ 4 4	51 14·924	14·900	14·918	14·908	14·913	+ ·029
ξ Sagittarii	−21 14	51 45·881	45·882	45·863	45·870	45·874	+ ·019
ε Aquilæ	+14 56	55 5·047	5·033	5·030	5·025	5·034	+ ·007
ζ Aquilæ *pr.*	+13 43	19 0 48·848	48·823	48·803	48·808	48·821	− ·010
λ Aquilæ	− 5 2	0 56·530	56·543	56·553	56·537	56·541	+ ·013
π Sagittarii	−21 11	3 49·035	49·050	49·058	49·077	49·055	+ ·020
ψ Sagitarii	−25 26	9 24·572	24·567	24·593	24·598	24·583	+ ·026
ω Aquilæ	+11 25	13 7·362	7·320	7·356	7·362	7·350	− ·016
δ Aquilæ	+ 2 55	20 27·408	27·405	27·408	27·415	27·409	+ ·016
μ Aquilæ	+ 7 10	29 12·255	12·234	12·242	12·265	12·248	− ·033
54 Sagittarii	−16 31	34 59·703	59·705	59·713	59·698	59·705	+ ·005
f Sagittarii	−20 0	40 31·776	31·748	31·790	31·797	31·778	+ ·018
γ Aquilæ	+10 22	41 30·340	30·330	30·363	30·344	30·344	+ ·011
δ Sagittæ	+18 17	42 55·690	55·740	55·720	55·715	55·716	− ·026
β Aquilæ	+ 6 9	19 50 24·107	24·077	24·084	24·063	24·083	+ ·005
γ Sagittæ	+19 13	54 18·576	18·565	18·592	18·583	18·579	− ·008
θ Aquilæ	− 1 7	20 6 8·743	8·758	8·752	8·757	8·753	+ ·018
α^2 Capricorni	−12 51	12 30·437	30·468	30·442	30·412	30·440	+ ·021
β Capricorni	−15 6	15 23·645	23·633	23·630	23·640	23·637	− ·005
ε Delphini	+10 58	28 26·142	26·117	26·113	26·144	26·129	− ·018
β Delphini	+14 15	32 51·590	51·564	51·595	51·575	51·582	− ·036
υ Capricorni	−18 29	34 21·483	21·478	21·513	21·503	21·494	+ ·010
α Delphini	+15 34	34 59·600	59·573	59·600	59·598	59·593	− ·019
ε Aquarii	− 9 52	42 15·824	15·824	15·820	15·823	15·823	+ ·016
μ Aquarii	− 9 22	47 15·663	15·676	15·683	15·663	15·671	+ ·016
32 Vulpeculæ	+27 41	50 17·839	17·836	17·862	17·842	17·845	− ·039
θ Capricorni	−17 38	21 0 19·642	19·625	19·636	19·612	19·629	+ ·023
ν Aquarii	−11 47	4 8·848	8·866	8·880	8·865	8·865	+ ·019
α Equulei	+ 4 50	10 49·506	49·542	49·535	49·528	49·528	+ ·012
ι Capricorni	−17 16	16 40·780	40·764	40·786	40·787	40·779	− ·008
1 Pegasi	+19 23	17 27·680	27·708	27·680	27·662	27·683	− ·024
ζ Capricorni	−22 51	20 57·546	57·556	57·540	57·554	57·549	− ·010
β Aquarii	− 6 1	26 17·727	17·731	17·735	17·745	17·735	+ ·019
ξ Aquarii	− 8 18	32 25·755	25·755	25·740	25·748	25·750	− ·004
γ Capricorni	−17 7	34 33·090	33·079	33·073	33·085	33·082	− ·017
ε Pegasi	+ 9 25	39 16·480	16·465	16·476	16·498	16·480	+ ·012
δ Capricorni	−16 35	41 31·350	31·344	31·376	31·388	31·365	+ ·021
16 Pegasi	+25 27	48 30·660	30·675	30·668	30·675	30·670	− ·035
α Aquarii	− 0 48	22 0 38·898	38·897	38·886	38·914	38·899	+ ·003
ι Aquarii	−14 21	1 2·268	2·260	2·233	2·255	2·254	+ ·027
θ Pegasi	+ 5 42	5 9·340	9·330	9·308	9·328	9·326	− ·024
θ Aquarii	− 8 17	11 33·458	33·448	33·447	33·473	33·457	+ ·013
γ Aquarii	− 1 53	16 29·523	29·508	29·470	29·530	29·508	+ ·012
σ Aquarii	−11 11	25 21·352	21·362	21·362	21·347	21·356	− ·014
η Aquarii	− 0 38	30 13·123	13·080	13·081	13·103	13·097	+0·011
ζ Pegasi	+10 19	36 28·455	28·442	28·453	28·440	28·448	− ·026
λ Pegasi	+23 2	41 42·798	42·814	42·780	42·764	42·789	− ·025
λ Aquarii	− 8 7	47 23·896	23·898	23·883	23·894	23·893	+ ·013
δ Aquarii	−16 21	49 20·658	20·650	20·667	20·668	20·661	+ ·033
α Pegasi	+14 40	59 46·743	46·773	46·740	46·725	46·745	+ ·004
c^2 Aquarii	−21 43	23 4 6·939	6·973	6·941	6·953	6·952	+ ·025
γ Piscium	+ 2 44	11 58·873	58·875	58·870	58·873	58·873	·000
τ Pegasi	+23 12	15 41·185	41·170	41·188	41·170	41·178	− ·002
υ Pegasi	+22 51	20 23·204	23·237	23·226	23·220	23·222	− ·018
κ Piscium	+ 0 42	21 48·360	48·370	48·367	48·388	48·371	− ·010
70 Pegasi	+12 13	24 5·812	5·820	5·813	5·792	5·809	+ ·010
ι Piscium	+ 5 5	34 48·370	48·392	48·390	48·372	48·381	− ·013
ω^2 Aquarii *pr.*	−15 6	37 32·223	32·229	32·233	32·193	32·220	+ ·002
φ Pegasi	+18 34	47 23·998	23·995	23·968	23·964	23·981	+ ·005
ω Piscium	+ 6 19	54 10·542	10·527	10·570	10·518	10·539	− ·012
2 Ceti	−17 54	58 37·048	37·063	37·053	37·063	37·057	+ ·006

On comparing the entries in columns 3, 4, 5, and 6 of this table with the mean contained in column 7, the discordances between right ascension observations made in the four conditions of the instrument may be summarised as follows :—

TABLE II.—*Discordances between Time Determinations in the Four Different Conditions of the Transit Circle.*

R.A.	Δα.				No. of Stars.
	I. E.	I. W.	II. E.	II. W.	
h h	s	s	s	s	
0— 1	+ 0·004	+ 0·002	− 0·001	− 0·006	11
1— 2	+ ·003	− ·005	− ·003	+ ·005	11
2— 3	·000	− ·003	− ·002	+ ·004	15
3— 4	+ ·001	·000	− ·004	+ ·002	14
4— 5	+ ·001	+ ·001	+ ·004	− ·006	12
5— 6	− ·001	·000	− ·004	+ ·004	11
6— 7	+ ·007	− ·005	− ·004	+ ·001	13
7— 8	+ ·003	+ ·001	− ·001	− ·003	9
8— 9	− ·003	+ ·006	− ·005	+ ·001	11
9—10	+ ·004	− ·009	+ ·005	− ·002	9
10—11	− ·002	·000	− ·003	+ ·003	11
11—12	− ·007	·000	− ·001	+ ·008	10
12—13	+ ·005	− ·004	+ ·001	− ·003	10
13—14	+ ·001	− ·005	+ ·004	·000	9
14—15	− ·001	+ ·002	− ·003	+ ·002	11
15—16	− ·006	·000	+ ·005	− ·001	13
16—17	+ ·002	− ·004	+ ·001	·000	8
17—18	+ ·006	+ ·007	− ·007	− ·006	10
18—19	·000	+ ·001	− ·003	+ ·002	11
19—20	− ·001	− ·008	+ ·005	+ ·004	13
20—21	·000	− ·004	+ ·004	− ·001	10
21—22	− ·004	·000	+ ·001	+ ·003	12
22—23	+ ·007	+ ·002	− ·011	+ ·001	12
23—24	− 0·003	+ 0·006	+ 0·003	− 0·007	11

There appears to be no sensible trace of systematic run in these residuals, as may be expected since each column is necessarily constrained to follow the system of

Newcomb's Catalogue. If we similarly compare the mean results with those of Newcomb's Catalogue, the comparison may be summarised as follows :—

TABLE III.—*Comparison of Cape Ledgers with Newcomb's Catalogue in order of Right Ascension.*

(Cape Ledgers—Newcomb).

R.A.	Δα.	No. of Stars.	R.A.	Δα.	No. of Stars.
h h	s		h h	s	
0— 1	−0·001	11	12—13	−0·013	10
1— 2	+ ·003	11	13—14	+ ·007	9
2— 3	+ ·004	15	14—15	− ·003	11
3— 4	− ·003	14	15—16	− ·007	13
4— 5	+ ·001	12	16—17	− ·003	8
5— 6	− ·003	11	17—18	+ ·005	10
6— 7	− ·012	13	18—19	+ ·010	11
7— 8	− ·002	9	19—20	+ ·002	13
8— 9	− ·006	11	20—21	− ·004	10
9—10	+ ·006	9	21—22	+ ·001	12
10—11	+ ·009	11	22—23	+ ·002	12
11—12	+0·002	10	23—24	−0·001	11

Here again the differences are insignificant. If, however, we arrange the stars in order of declination, we derive the following summary of results :—

TABLE IV.—*Comparison of Cape Ledgers with Newcomb's Catalogue in order of Declination.*

(Cape Ledgers—Newcomb).

Limits of Declination.	Δα.	No. of Stars.	Limits of Declination.	Δα.	No. of Stars.
° ′ ° ′	s		° ′ ° ′	s	
+27 40 to +22 51	−0·023	11	+ 2 17 to − 0 22	+0·004	11
+22 46 „ +21 5	− ·028	11	− 0 29 „ − 3 25	+ ·011	11
+21 4 „ +19 20	− ·013	11	− 3 26 „ − 5 0	+ ·002	11
+19 13 „ +17 15	− ·004	12	− 5 2 „ − 8 11	+ ·007	11
+16 43 „ +14 51	− ·015	11	− 8 14 „ − 9 23	+ ·004	11
+14 50 „ +12 36	− ·013	11	− 9 42 „ −11 46	+ ·002	12
+12 15 „ +10 22	− ·013	11	−11 52 „ −14 21	+ ·014	11
+10 21 „ + 9 17	·000	11	−14 27 „ −15 38	+ ·011	11
+ 8 40 „ + 7 2	− ·002	11	−15 40 „ −17 37	+ ·004	12
+ 7 2 „ + 5 42	− ·007	11	−17 38 „ −21 10	+ ·011	11
+ 5 9 „ + 4 4	− ·003	11	−21 14 „ −22 50	+ ·024	11
+ 3 56 „ + 2 18	+ ·003	11	−22 50 „ −29 47	+ ·018	11

Thus the observations indicate a correction to the adopted clock star places, dependent on the declination, which is zero at, or slightly to the north of, the equator,

but which increases southwards at the rate of about $0^{s} \cdot 001$ per degree of declination. The effects of such an error on the periodic errors in R.A. will, however, be insignificant, as the clock stars in the higher declinations are fairly uniformly distributed in right ascension, as is evidenced by the following table, showing the distribution of clock stars in declination.

TABLE V.—*Distribution of Clock Stars.*

R.A.	Mean Dec.	No. of Stars.	R.A.	Mean Dec.	No. of Stars.
h h	°		h h	°	
0— 1	− 1	11	12—13	+ 1	10
1— 2	− 1	11	13—14	− 3	9
2— 3	+ 3	15	14—15	− 2	11
3— 4	+ 4	14	15—16	− 4	13
4— 5	+ 8	12	16—17	+ 6	8
5— 6	− 4	11	17—18	− 5	10
6— 7	+ 3	13	18—19	− 3	11
7— 8	+ 4	9	19—20	0	13
8— 9	+ 3	11	20—21	+ 4	10
9—10	+ 4	9	21—22	− 4	12
10—11	0	11	22—23	0	12
11—12	+ 3	10	23—24	+ 3	11

In consideration of this approximate symmetry of distribution any errors in the right ascensions of Newcomb's Catalogue dependent on the declinations may be regarded as sensibly eliminated from the mean results of the Cape Ledgers, and so far as such errors are concerned the latter may be regarded as defining an independent fundamental system. In so far, however, as the errors of the original system depend on the right ascension they will only be partially smoothed out, the more wide-spread features being reproduced almost in their entirety. To examine such errors recourse must be had to additional observations which have not otherwise been included in the formation of the Catalogue.

Discussion of Daylight Observations of Clock Stars.

In addition to the observations made in the night watches directly for the purposes of the Catalogue, regular observations of the Sun and inferior planets have been made by day. These have always been accompanied by observations of bright stars for the determination of clock error. The stars used are for the most part contained in the above clock star list, but include also the following additional stars, the places quoted being derived from the Cape Ledgers in the same manner as for the former stars.

TABLE VI.—*Additional Clock Stars used for Daylight Observations.*

Star.	Dec. 1900.	R. A. 1900·0.	Corr. to Newcomb.	Star.	Dec. 1900.	R. A. 1900·0.	Corr. to Newcomb.
	° ′	h m s	s		° ′	h m s	s
α Tauri	+16 18	4 30 10·914	+0·024	γ Corvi	−16 59	12 10 39·740	+0·011
β Orionis	− 8 19	5 9 43·936	+ ·039	α Virginis	−10 38	13 19 55·432	− ·001
γ Orionis	+ 6 16	5 19 46·044	+ ·016	α Boötis	+19 42	14 11 6·017	+ ·017
β Leporis *seq*	−20 50	5 23 57·607	− ·041	γ Scorpii	−24 53	14 58 12·932	− ·021
ε Orionis	− 1 16	5 31 8·356	+ ·017	π Scorpii	−25 50	15 52 48·050	− ·008
α Orionis	+ 7 23	5 49 45·502	+ ·030	σ Scorpii	−25 21	16 15 6·518	− ·013
ζ Canis Majoris	−30 1	6 16 28·457	+ ·057	α Scorpii *seq.*	−26 13	16 23 16·488	+ ·009
γ Geminorum	+16 29	6 31 56·119	− ·003	ε Scorpii	−34 7	16 43 41·157	+ ·067
α Canis Majoris	−16 35	6 40 44·633	+ ·139	γ Sagittarii	−30 26	17 59 23·072	+ ·071
ε Canis Majoris	−28 50	6 54 41·744	+ ·002	δ Sagittarii	−29 52	18 14 35·542	+ ·010
δ Canis Majoris	−26 14	7 4 19·542	+ ·058	ε Sagittarii	−34 26	18 17 32·136	+ ·068
η Canis Majoris	−29 6	7 20 8·360	− ·058	σ Sagittarii	−26 25	18 49 3·929	+ ·062
α Canis Minoris	+ 5 29	7 34 4·089	+ ·035	ζ Sagittarii *m*	−30 1	18 56 14·998	+ ·028
β Geminorum	+28 16	7 39 11·845	− ·022	α Aquilæ	+ 8 36	19 45 54·263	+ ·002
ε Leonis	+24 14	9 40 10·585	− ·002	α Piscis Aust.	−30 9	22 52 7·580	+ ·010
α Leonis	+12 27	10 3 2·857	+ ·016	β Pegasi	+27 32	22 58 55·496	− ·037
ξ Hydræ	−31 18	11 28 4·927	− ·010				

Clock errors have been derived at the instant of each daylight transit, utilising the places of the stars as contained in the above tables and Newcomb's proper motions. Care has always been taken to control the level and azimuth variations by simultaneous reference to the nadir trough and meridian marks.

The clock errors at the same instants have also been derived by interpolation from adjacent night watches, assuming a uniform rate derived from observations approximately twenty-four hours, or a multiple thereof, apart. The details of the comparison between the two methods of determination are contained in the following table:—

TABLE VII.—*Comparison of Day and Night Determinations of Clock Error.*

Date.	Observer.	S.T. of Day Obs.	Mean S.T. of Night Obs.	Diff. Day—Night.	Date.	Observer.	S.T. of Day Obs.	Mean S.T. of Night Obs.	Diff. Day—Night.	Date.	Observer.	S.T. of Day Obs.	Mean S.T. of Night Obs.	Diff. Day—Night.
1908.		h m	h m	s	1908.		h m	h m	s	1908.		h m	h m	s
May 4	M	0 39	11 23	−0·03	May 13	M	0 39	12 12	−0·02	May 20	RC	5 10	11 42	−0·03
5		5 10	,,	+ ·05	14		5 10	,,	+ ·06	20		5 20	,,	+ ·07
5		5 20	,,	·00	17	JJ	0 39	12 7	− ·01	20	C	0 39	11 38	− ·07
11	C	0 39	11 6	− ·03	17		2 57	,,	+ ·08	20		1 19	,,	+ ·01
12		4 30	,,	− ·07	18		5 10	,,	+ ·06	21		5 10	,,	− ·03
12		5 10	,,	− ·04	18		5 20	,,	+ ·07	21		5 20	,,	+ ·02
12	AW	0 39	11 22	+ ·02	18	M	0 39	12 15	− ·01	26	AW	2 57	13 2	·00
13		5 3	,,	+ ·08	19		5 10	,,	+ ·02	27		6 18	,,	+ ·05
13		5 10	,,	+ ·06	19		5 20	,,	+ ·08	27		6 54	,,	+ ·02
13		5 20	,,	·00	19	RC	0 39	11 42	− ·03	27		7 4	,,	+ ·03

TABLE VII.—*continued.*

Date.	Observer.	S.T. of Day Obs.	Mean S.T. of Night Obs.	Diff. Day—Night.	Date.	Observer.	S.T. of Day Obs.	Mean S.T. of Night Obs.	Diff. Day—Night.	Date.	Observer.	S.T. of Day Obs.	Mean S.T. of Night Obs.	Diff. Day—Night.
1908.		h m	h m	s	1908.		h m	h m	s	1908.		h m	h m	s
June 5	M	6 41	12 49	+0·01	July 15	RC	5 32	16 37	+0·01	Sept. 7	RC	10 3	20 14	+0·05
5		6 54	,,	− ·02	15		5 43	,,	+ ·03	13	M	9 23	19 52	+ ·02
5	JW	1 49	13 0	+ ·03	16	AW	5 32	16 37	+ ·04	14	AW	9 23	20 4	+ ·12
5		2 1	,,	+ ·07	16		5 43	,,	+ ·05	14		10 3	,,	+ ·08
5		2 57	,,	+ ·02	16		6 19	,,	− ·01	15	JJ	9 23	20 38	+ ·07
9	AW	2 57	13 40	− ·04	19	JJ	5 10	15 29	+ ·03	15		10 3	,,	+ ·03
9		4 30	,,	+ ·02	19		5 20	,,	+ ·02	21	JJ	9 23	20 31	+ ·03
10		6 41	,,	+ ·02	19		5 32	,,	+ ·01	21		10 3	,,	+ ·13
10		7 4	,,	− ·01	19		5 43	,,	+ ·06	22	AP	9 23	20 49	+ ·01
15	AW	5 3	14 10	+ ·02	20	M	6 55	15 29	+ ·03	22		10 3	,,	− ·01
15		5 10	,,	+ ·05	20		7 5	,,	+ ·08	23	AW	9 23	21 2	+ ·03
16		7 4	,,	− ·01	20		7 34	,,	+ ·05	23		10 3	,,	− ·01
16		7 20	,,	− ·02	22	C	5 20	16 20	+ ·04	24	M	9 23	20 57	+ ·01
16	M	5 10	14 10	+ ·05	22		5 31	,,	+ ·05	24		10 3	,,	+ ·02
17		7 5	,,	·00	22		5 43	,,	+ ·05	27	JJ	10 3	21 14	+ ·01
17		7 20	,,	+ ·03	23	AP	5 10	16 18	+ ·03	29	JW	9 23	20 56	− ·03
17	RC	5 10	14 25	− ·01	23		5 20	,,	+ ·02	29		10 3	,,	+ ·03
18		7 5	,,	− ·06	23		5 32	,,	+ ·03	30	AP	9 23	21 10	− ·03
18		7 20	,,	− ·01	23		5 43	,,	+ ·06	30		10 3	,,	− ·05
19	AP	2 57	14 40	+ ·03	26	JW	5 10	16 26	+ ·03	Oct. 1		14 11	,,	− ·03
19		3 19	,,	− ·02	26		7 20	,,	+ ·04	1	RC	9 23	21 19	·00
19		3 29	,,	− ·05	26		7 34	,,	+ ·01	1		10 3	,,	·00
19		4 30	,,	·00	27	AW	5 32	16 33	+ ·08	5	M	10 3	21 56	− ·01
19		5 10	,,	+ ·04	27		5 43	,,	+ ·10	6	AW	11 9	21 56	− ·02
22	C	5 10	14 40	+ ·10	27		6 18	,,	+ ·02	6		11 44	,,	− ·03
22		5 43	,,	+ ·07	29	M	6 41	16 53	− ·01	7		14 11	,,	+ ·03
23		7 20	,,	+ ·07	29		6 55	,,	− ·01	7	C	10 3	22 30	+ ·03
28	C	5 20	15 0	+ ·12	29		7 5	,,	− ·01	8		14 11	,,	+ ·03
28		5 32	,,	+ ·09	29		7 34	,,	− ·05	8	AP	10 3	22 30	+ ·05
29		7 34	,,	+ ·03	30	AP	7 4	17 0	+ ·01	8		11 9	,,	+ ·04
29	AP	5 10	14 57	+ ·03	30		7 34	,,	+ ·04	8		11 44	,,	− ·06
29		5 20	,,	+ ·01	Aug. 9	JJ	6 19	19 0	·00	9		14 11	,,	− ·10
29		5 32	,,	− ·01	9		6 55	,,	·00	15	JJ	11 44	22 20	− ·06
29		5 43	,,	− ·05	9		7 34	,,	− ·01	18	C	11 9	21 31	− ·02
30		7 34	,,	·00	10	M	7 34	18 0	− ·03	18		11 44	,,	·00
July 5	JJ	5 32	15 20	+ ·08	11	RC	6 55	17 46	+ ·04	21	M	11 44	22 50	− ·07
5		5 43	,,	+ ·02	11		7 20	,,	+ ·04	22	AW	11 9	23 9	+ ·04
6	AW	4 30	15 20	+ ·10	11		7 34	,,	+ ·05	22		11 44	,,	+ ·09
6		5 3	,,	+ ·05	14	AW	11 9	18 30	− ·08	22		12 11	,,	+ ·06
6		5 10	,,	+ ·02	14	JW	6 32	18 48	− ·03	Nov. 2	JJ	11 44	23 13	− ·02
6		5 20	,,	+ ·08	14		6 41	,,	·00	2		12 11	,,	+ ·02
6		5 32	,,	+ ·04	14		6 55	,,	− ·02	12	JW	13 20	23 40	− ·01
7	AP	4 30	15 20	+ ·04	16	JJ	6 41	18 16	+ ·06	12		14 11	,,	− ·01
7		5 32	,,	+ ·05	16		7 5	,,	+ ·04	15	JJ	13 20	23 54	+ ·02
7		5 43	,,	+ ·03	20	M	7 20	18 16	− ·06	17	C	12 29	0 6	+ ·05
8	M	4 30	15 20	+ ·03	20		7 34	,,	− ·05	17		13 20	,,	+ ·01
8		5 10	,,	− ·02	20		7 39	,,	− ·01	19	RC	13 20	0 52	+ ·10
8		5 20	,,	− ·03	21	AW	6 55	18 0	− ·04	19		14 11	,,	+ ·08
8		5 32	,,	·00	21		7 34	,,	− ·05	22	JJ	13 20	0 30	+ ·04
15	RC	5 20	16 37	+ ·01	Sept. 7	RC	9 23	20 14	− ·05	22		14 11	,,	+ ·06

TABLE VII.—*continued.*

Date.	Observer.	S.T. of Day Obs.	Mean S.T. of Night Obs.	Diff. Day—Night.
1908.		h m	h m	s
Nov. 23	C	13 20	0 30	+0·04
23		13 50	,,	+ ·03
23		14 11	,,	+ ·01
Dec. 1	AW	16 0	1 35	·00
3	JW	14 11	2 19	+ ·03
6	M	14 11	3 5	·00
7	C	14 11	3 34	− ·01
7		15 12	,,	− ·03
13	C	14 11	3 14	− ·04
13		14 45	,,	+ ·07
13		16 23	,,	− ·03
17	JW	15 12	2 33	− ·01
17		15 56	,,	− ·04
17		16 24	,,	− ·03
21	AP	15 12	2 54	− ·08
21		15 39	,,	− ·16
22	JW	15 12	2 45	− ·05
22		16 23	,,	− ·03
1909.				
Jan. 5	JJ	16 24	2 45	+ ·05
11	M	16 24	2 45	− ·05
20	C	17 39	5 0	− ·01
20		18 15	,,	− ·02
20		18 49	,,	− ·06
21	M	17 31	5 0	·00
21		17 39	,,	− ·04
24	JJ	17 5	5 14	+ ·01
24		17 39	,,	+ ·06
25	RC	17 39	5 24	+ ·02
25		18 50	,,	− ·05
27	JW	18 15	4 52	− ·01
27		18 57	,,	− ·10
28	AW	19 46	4 14	− ·07
29	M	18 15	5 39	− ·05
29		18 50	,,	− ·05
31	JJ	18 15	6 1	− ·05
31		18 50	,,	·00
31		18 57	,,	+ ·04
Feb. 1	C	18 15	6 5	− ·02
1		18 50	,,	− ·07
1		18 57	,,	− ·04
2	AP	18 15	5 50	− ·10
2		18 22	,,	− ·08
2		18 50	,,	− ·10
2		18 57	,,	− ·15
3	AW	18 15	6 0	− ·01
3		18 22	,,	− ·06
3		18 49	,,	·00
3		18 56	,,	·00

Date.	Observer.	S.T. of Day Obs.	Mean S.T. of Night Obs.	Diff. Day—Night.
1909.		h m	h m	s
Feb. 5	M	18 15	5 56	−0·01
5		18 50	,,	− ·01
7	JJ	18 15	6 24	− ·13
9	C	18 15	5 47	− ·07
9		18 50	,,	− ·08
10	AW	18 50	5 47	− ·02
10		18 57	,,	− ·03
10		19 42	,,	− ·04
10		19 46	,,	− ·08
11	AP	18 50	6 39	·00
11		18 57	,,	− ·09
11		19 46	,,	·00
14	AP	19 46	6 46	− ·05
25	AW	19 46	6 45	+ ·02
28	JJ	19 46	7 53	+ ·03
Mar. 1	M	19 42	7 50	− ·06
1		19 46	,,	− ·03
2	JW	19 42	7 40	− ·06
2		19 46	,,	− ·07
3	AP	19 46	7 27	− ·12
4	AW	20 16	8 8	− ·01
4		21 27	,,	+ ·04
4		21 40	,,	− ·06
8	AP	19 46	7 36	+ ·01
8		21 27	,,	+ ·03
8		21 40	,,	− ·12
9	JW	19 42	7 30	− ·02
9		19 46	,,	− ·02
15	AP	21 27	8 8	− ·06
15		21 40	,,	+ ·02
16	RC	21 27	8 34	− ·06
16		21 40	,,	− ·01
16		21 42	,,	− ·05
17	JW	21 27	8 26	− ·01
17		21 40	,,	− ·04
18	JJ	22 53	7 30	− ·03
19	AW	21 42	7 30	− ·01
19		22 53	,,	+ ·04
21	M	22 53	8 53	− ·10
28	AP	22 53	9 11	− ·06
28		23 0	,,	− ·12
29	JW	22 53	9 45	− ·05
30	AW	22 53	9 45	− ·07
30		23 0	,,	− ·01
Apr. 4	C	21 40	10 12	·00
4		22 1	,,	− ·04
4		23 0	,,	+ ·04
5	AP	22 1	10 12	− ·07
5		22 53	,,	− ·11
9	AW	22 53	10 16	− ·05

Date.	Observer.	S.T. of Day Obs.	Mean S.T. of Night Obs.	Diff. Day—Night.
1909.		h m	h m	s
Apr. 9	AW	0 39	10 16	+0·04
12	JJ	0 39	10 36	− ·12
13	AW	0 39	10 59	+ ·01
15	C	22 53	10 14	− ·04
15		23 0	,,	+ ·04
15		0 39	,,	− ·05
18	AW	0 8	10 54	+ ·06
18		0 39	,,	+ ·03
19	JW	22 53	10 49	− ·16
19		0 39	,,	− ·09
20	JJ	0 39	9 57	·00
21	AW	23 0	10 19	+ ·02
21		0 9	,,	·00
21		0 39	,,	− ·02
23	C	22 53	11 44	− ·02
23		23 0	,,	+ ·08
23		0 9	,,	− ·04
23		0 39	,,	+ ·02
25	JJ	0 9	11 22	− ·10
25		0 39	,,	+ ·05
26	C	0 8	11 28	·00
May 2	JW	0 8	12 57	+ ·09
2		0 39	,,	+ ·01
6	JJ	0 39	12 3	− ·14
6		1 19	,,	− ·07
7	AP	0 9	12 3	− ·07
7		0 15	,,	− ·10
7		0 39	,,	− ·07
9	RC	0 39	12 35	+ ·01
10	AP	0 9	13 8	·00
10		0 15	,,	− ·03
10		0 39	,,	− ·10
10		1 19	,,	+ ·03
12	JJ	0 15	12 52	+ ·07
12		0 39	,,	+ ·05
13	JW	0 39	12 44	+ ·03
13		1 19	,,	+ ·01
13		1 49	,,	+ ·03
16	C	0 9	13 4	+ ·08
16		0 15	,,	− ·02
16		1 19	,,	+ ·04
17		5 10	,,	+ ·01
17	JJ	0 39	13 20	+ ·01
18		5 20	,,	+ ·07
18		5 32	,,	+ ·02
28	C	5 32	13 23	+ ·03
28	AP	1 19	12 54	+ ·01
28		1 50	,,	− ·06
28		2 2	,,	− ·06
June 1	RC	6 17	14 18	+ ·05

TABLE VII.—*continued.*

Date.	Observer.	S.T. of Day Obs.	Mean S.T. of Night Obs.	Diff. Day—Night.	Date.	Observer.	S.T. of Day Obs.	Mean S.T. of Night Obs.	Diff. Day—Night.	Date.	Observer.	S.T. of Day Obs.	Mean S.T. of Night Obs.	Diff. Day—Night.
1909.		h m	h m	s	1909.		h m	h m	s	1909.		h m	h m	s
June 1	RC	6 41	14 18	+0·05	Aug. 12	JJ	7 35	18 32	+0·03	Oct. 18	AP	15 53	22 24	+0·02
2	C	5 3	14 18	+ ·09	12		8 4	,,	+ ·01	19	C	15 12	22 21	− ·07
2		5 10	,,	+ ·04	15	C	7 35	18 33	+ ·03	19		15 55	,,	+ ·04
8	JW	5 32	13 55	+ ·02	16		11 44	,,	·00	19		16 24	,,	− ·02
8		7 5	,,	+ ·05	16	JJ	6 55	19 20	+ ·01	20	RC	16 0	22 17	− ·03
9	JW	2 57	13 58	+ ·02	16		7 35	,,	− ·04	20		16 24	,,	+ ·01
10		6 32	,,	− ·04	16		8 4	,,	+ ·04	21	JJ	15 40	22 29	·00
10		6 41	,,	+ ·03	19	C	11 44	19 6	− ·02	21		15 55	,,	− ·04
10	C	4 30	14 11	+ ·02	20	RC	11 44	18 51	− ·04	21		16 0	,,	+ ·04
11		6 19	,,	− ·08	20		12 5	,,	− ·02	22	M	15 55	22 35	− ·06
11		6 32	,,	+ ·06	23	C	9 23	18 13	+ ·03	22		16 0	,,	− ·03
18	JJ	2 57	14 0	− ·01	24		11 44	,,	+ ·03	22	AP	13 20	22 33	+ ·10
18		4 31	,,	+ ·01	24		12 5	,,	+ ·04	25	RC	15 55	20 54	+ ·04
30	JJ	5 10	15 41	+ ·03	25	JJ	12 5	17 57	+ ·03	25		16 24	,,	+ ·07
30		5 20	,,	·00	26	RC	11 44	19 15	+ ·01	29	RC	13 20	0 32	− ·02
30		5 32	,,	+ ·06	26		12 5	,,	− ·01	Nov. 1	M	16 24	23 0	− ·01
July 4	AP	5 10	15 37	·00	26		12 11	,,	+ ·01	1		17 5	,,	− ·09
4		5 20	,,	− ·03	27	AP	12 11	19 1	+ ·01	5	AW	12 58	23 31	+ ·06
4		5 32	,,	− 03	Sept. 1	AP	9 23	19 23	+ ·02	5		13 20	,,	+ ·10
5	C	5 20	15 57	+ ·05	1		10 4	,,	+ ·04	7	AW	12 30	23 20	− ·02
5		5 50	,,	+ ·09	2		12 25	,,	+ ·04	7		12 58	,,	+ ·01
6	JJ	4 31	15 50	+ ·07	3	M	12 25	19 12	·00	7		13 20	,,	+ ·01
6		5 3	,,	+ ·05	3		12 30	,,	+ ·07	8		16 44	,,	+ ·07
6		5 10	,,	+ ·08	9	C	12 30	19 30	− ·01	8		17 5	,,	+ ·04
6		5 20	,,	+ ·04	9		13 14	,,	+ ·04	Dec. 8	JJ	18 50	1 54	·00
7	RC	5 3	15 43	·00	13	JJ	12 30	19 44	+ ·03	8		19 42	,,	+ ·04
7		5 10	,,	+ ·03	13		13 14	,,	+ ·05	8		19 46	,,	+ ·02
7		5 20	,,	+ ·07	13		13 20	,,	·00	13	M	19 46	1 30	− ·09
11	JW	5 10	16 24	+ ·03	14	RC	13 14	19 44	+ ·05	14	AW	19 42	1 45	− ·06
11		5 20	,,	+ ·06	14		13 20	,,	+ ·01	14		19 46	,,	+ ·04
16	AP	5 10	16 52	+ ·06	15	C	12 30	20 18	− ·04	15	JW	19 46	1 57	− ·07
16		5 20	,,	·00	15		13 14	,,	− ·04	16	RC	19 42	2 22	− ·12
16		5 32	,,	+ ·05	15		13 20	,,	− ·07	16		19 46	,,	− ·05
16		6 19	,,	− ·04	16	AP	12 30	20 52	+ ·04	21	JJ	19 46	2 35	− ·05
18	JJ	6 19	16 38	+ ·05	16		13 14	,,	− ·02	21		20 16	,,	− ·01
18		6 32	,,	+ ·05	16		13 20	,,	− ·03					
19		10 4	,,	+ ·09	17	JJ	13 14	20 7	+ ·07	1910.				
20	JJ	5 10	15 50	+ ·06	17		13 20	,,	+ ·03	Jan. 6	JJ	15 55	4 51	− ·02
20		5 32	,,	− ·02	21	JJ	13 14	20 13	+ ·01	6		16 24	,,	+ ·02
20		5 44	,,	+ ·02	21		13 20	,,	+ ·03	6		16 32	,,	− ·01
22	RC	5 32	17 11	+ ·05	27	C	11 44	21 35	+ ·02	6		16 44	,,	+ ·11
22		6 19	,,	+ ·02	28		13 20	,,	− ·04	9	JJ	15 55	4 22	− ·04
22		6 41	,,	− ·01	28		14 12	,,	+ ·03	9		16 24	,,	− ·04
30	RC	5 44	17 45	+ ·03	Oct. 1	AP	10 4	20 42	+ ·12	9		17 5	,,	+ ·01
30		5 50	,,	+ ·08	1		11 9	,,	·00	10	JW	15 55	3 51	− ·01
Aug. 2	C	5 20	17 34	+ ·04	8	C	13 20	21 29	− ·07	10		16 24	,,	− ·04
2		5 32	,,	+ ·06	8		14 46	,,	− ·02	10		16 32	,,	− ·07
2		5 44	,,	+ ·07	8		15 12	,,	− ·04	10		16 44	,,	+ ·03
3		10 4	,,	+ ·02	18	AP	14 46	22 24	− ·09	11	M	17 31	3 53	− ·22
11	AP	7 35	18 42	+ ·04	18		15 12	,,	− ·06	13	AP	16 24	4 5	+ ·03

TABLE VII.—*continued.*

Date.	Observer.	S.T. of Day Obs.	Mean S.T. of Night Obs.	Diff. Day—Night.	Date.	Observer.	S.T. of Day Obs.	Mean S.T. of Night Obs.	Diff. Day—Night.	Date.	Observer.	S.T. of Day Obs.	Mean S.T. of Night Obs.	Diff. Day—Night.
1910.		h m	h m	s	1910.		h m	h m	s	1910.		h m	h m	s
Jan. 13	AP	16 44	4 5	+0·08	Mar. 6	RC	19 46	13 52	−0·03	May 2	C	0 39	19 25	0·00
13		17 5	,,	− ·08	6		21 27	,,	·00	5	AP	0 39	19 37	− ·12
16	JW	16 24	3 53	− ·07	8	M	19 46	14 9	− ·09	6	AW	2 2	19 37	·00
16		16 32	,,	− ·05	8		21 40	,,	− ·10	8	AW	1 50	19 57	− ·03
16		17 5	,,	− ·10	9	AW	19 46	14 45	+ ·02	8		2 2	,,	+ ·06
19	AP	17 39	5 6	− ·13	16	JW	21 40	15 16	+ ·02	9		5 10	,,	+ ·04
19		18 15	,,	− ·07	16		22 53	,,	− ·07	11	M	0 39	20 16	·00
19		18 22	,,	− ·16	20	RC	21 40	15 32	·00	12		5 10	,,	+ ·03
21	C	18 15	5 3	− ·08	20		21 42	,,	− ·04	12	C	0 39	20 33	+ ·03
21		18 22	,,	− ·09	22	M	21 39	15 33	− ·02	12		1 10	,,	+ ·05
25	JJ	18 15	5 52	− ·06	22		22 53	,,	− ·07	13	RC	0 9	20 33	− ·03
25		18 50	,,	− ·02	23	M	22 53	15 42	− ·11	13		0 39	,,	+ ·04
26	RC	18 0	4 55	·00	28	JJ	21 27	16 27	+ ·06	18	M	0 39	20 51	− ·04
26		18 15	,,	− ·03	28		22 53	,,	− ·01	18		2 2	,,	− ·07
26		18 22	,,	− ·06	29	JW	21 40	16 39	+ ·04	24	RC	1 49	20 40	·00
27	M	17 31	8 34	− ·03	29		22 53	,,	− ·05	24		2 2	,,	+ ·02
27		17 39	,,	− ·09	30	M	21 42	16 53	·00	25	M	1 49	20 40	+ ·02
28	AW	17 39	8 25	− ·04	30		22 1	,,	·00	25		2 2	,,	+ ·05
28		18 0	,,	+ ·01	30		22 17	,,	− ·03	June 5	M	2 58	20 31	+ ·07
28		18 15	,,	− ·06	31	AW	22 1	17 17	+ ·03	12	M	2 58	21 15	− ·05
28		18 18	,,	+ ·05	31		22 6	,,	+ ·08	13	AP	2 58	21 27	+ ·07
28		18 22	,,	− ·03	31		22 50	,,	+ ·05	13		4 30	,,	+ ·01
30	M	18 18	9 0	− ·01	31		23 0	,,	+ ·09	14	JW	2 58	21 59	+ ·05
30		18 22	,,	− ·04	Apr. 5	M	21 40	16 2	− ·01	15	AW	3 54	22 9	+ ·10
30		18 50	,,	·00	5		22 1	,,	+ ·03	15		4 31	,,	+ ·10
Feb. 2	AW	17 31	9 19	+ ·02	6	AW	0 39	16 21	− ·05	15		4 45	,,	+ ·16
2		17 39	,,	− ·01	7		2 58	,,	+ ·02	19	AP	2 58	22 11	+ ·05
2		18 22	,,	− ·01	7	JJ	22 53	16 40	+ ·06	19		4 30	,,	+ ·04
4	JJ	17 31	11 17	+ ·06	8	JW	22 53	16 34	− ·12	26	RC	2 58	22 4	+ ·08
4		17 39	,,	+ ·01	8		23 0	,,	− ·09	26		3 54	,,	+ ·10
4		18 15	,,	− ·04	11	JW	22 53	18 14	− ·03	26		4 31	,,	+ ·04
4		18 22	,,	− ·01	14	AP	22 53	18 3	+ ·02	27	M	2 58	22 40	+ ·06
13	RC	18 15	13 18	+ ·03	17	AP	22 53	18 31	− ·02	27		3 42	,,	+ ·12
13		18 22	,,	− ·05	17		23 0	,,	+ ·01	30	AP	3 54	23 46	+ ·03
13		18 50	,,	+ ·06	19	RC	22 53	18 44	− ·08	30		4 31	,,	+ ·11
15	AP	19 46	12 52	− ·01	21	JW	22 53	19 14	− ·04	July 1	AW	3 54	23 51	+ ·10
16	M	18 22	12 14	− ·05	21		0 39	,,	− ·05	1		4 31	,,	+ ·09
16		18 50	,,	− ·02	25	C	0 39	18 56	− ·05	1		4 45	,,	+ ·10
20	AP	19 46	12 30	− ·05	25		1 4	,,	− ·02	1		5 3	,,	+ ·06
21	AW	19 42	12 14	+ ·01	26	M	0 39	18 52	− ·02	1		5 10	,,	+ ·06
21		19 46	,,	− ·01	27		3 42	,,	− ·08	10	AP	4 31	23 51	+ ·09
22	JW	19 4	13 2	+ ·03	27	AW	0 9	18 47	+ ·05	10		5 3	,,	+ ·03
22		19 46	,,	+ ·08	27		0 39	,,	− ·02	10		5 10	,,	+ ·06
23	RC	19 42	13 2	+ ·06	28	RC	0 9	18 59	+ ·02	10		5 20	,,	+ ·03
23		19 46	,,	− ·04	28		0 39	,,	+ ·01	13	AW	4 30	0 7	+ ·04
24	JJ	19 46	14 10	− ·01	29	JJ	0 9	18 59	+ ·05	13		5 10	,,	+ ·13
Mar. 1	JW	19 42	13 55	+ ·03	29		0 39	,,	+ ·03	13		5 20	,,	+ ·10
1		19 46	,,	− ·06	May 1	RC	0 9	19 2	− ·05	13		5 24	,,	− ·01
3	RC	19 46	13 33	− ·05	1		0 39	,,	− ·06	13		5 27	,,	+ ·06
3		20 15	,,	+ ·02	2	C	0 9	19 25	+ ·03	13		5 31	,,	+ ·06

TABLE VII.—*continued.*

Date.	Observer.	S.T. of Day Obs.	Mean S.T. of Night Obs.	Diff. Day—Night.	Date.	Observer.	S.T. of Day Obs.	Mean S.T. of Night Obs.	Diff. Day—Night.	Date.	Observer.	S.T. of Day Obs.	Mean S.T. of Night Obs.	Diff. Day—Night.
1910.		h m	h m	s	1910.		h m	h m	s	1911.		h m	h m	s
July 25	AP	5 10	1 9	+0·10	Sept. 21	JW	9 23	1 48	0·00	Jan. 25	JJ	18 15	4 34	+0·02
25		5 20	,,	+ ·11	21		10 4	,,	− ·05	25		18 22	,,	+ ·01
25		5 29	,,	+ ·05	28	RC	9 23	3 6	+ ·04	26		21 40	,,	− ·01
25		5 43	,,	+ ·07	28		11 9	,,	·00	30	AW	18 15	5 47	+ ·03
25		5 50	,,	+ ·07	29	M	10 4	3 3	+ ·04	30		18 22	,,	− ·07
26	RC	5 20	1 23	+ ·11	29		11 9	,,	− ·02	30		19 46	,,	− ·08
26		5 29	,,	+ ·07	30	AP	10 4	3 2	+ ·06	31	RC	18 15	5 9	− ·03
26		6 19	,,	+ ·05	Oct. 3	AW	10 4	3 9	+ ·14	31		18 22	,,	− ·08
31	AW	5 50	21 20	+ ·09	3		11 9	,,	+ ·03	Feb. 1	M	18 22	5 15	·00
31		6 19	,,	+ ·04	10	M	10 4	2 38	− ·02	1		18 50	,,	·00
31		6 32	,,	+ ·05	10		11 44	,,	− ·05	3	JJ	18 50	6 18	− ·07
Aug. 1	RC	5 43	20 30	+ ·03	18	C	11 44	2 17	+ ·02	3		19 46	,,	− ·06
1		6 55	,,	+ ·03	21	JW	12 5	4 0	− ·01	7	AW	22 53	6 27	− ·03
1		7 4	,,	+ ·05	21		12 11	,,	+ ·02	7		22 59	,,	+ ·07
5	AP	5 43	19 48	+ ·09	23	JW	12 5	2 58	+ ·01	8	M	22 53	5 44	− ·02
5		5 50	,,	+ ·11	23		12 11	,,	+ ·06	8	JJ	19 4	5 42	·00
5		6 19	,,	+ ·09	24	AW	12 11	2 55	+ ·02	9		22 53	,,	− ·11
5		7 21	,,	+ ·05	26	RC	12 5	3 44	+ ·11	9	RC	18 50	5 42	− ·04
16	C	6 55	21 54	+ ·04	26		13 20	,,	+ ·08	9		19 4	,,	− ·03
16		7 5	,,	+ ·01	Nov. 3	JW	12 29	2 35	− ·06	9		19 46	,,	+ ·04
16		7 45	,,	+ ·05	3		13 20	,,	− ·05	16	AP	18 50	6 51	− ·03
17	AP	6 55	21 55	+ ·03	8	JW	12 30	1 51	+ ·07	16		19 46	,,	+ ·07
17		7 5	,,	+ ·04	8		13 20	,,	+ ·02	17		22 53	,,	− ·03
19	M	8 4	21 52	·00	13	JW	13 20	2 16	− ·04	19	AW	19 42	7 45	− ·04
23	M	12 5	23 6	+ ·02	13		14 11	,,	+ ·04	19		19 46	,,	− ·08
23		12 11	,,	− ·03	14	C	13 20	2 19	+ ·02	20	AP	19 46	7 6	+ ·01
Sept. 1	AW	8 4	22 3	+ ·08	14		14 11	,,	+ ·04	20		20 16	,,	− ·01
1		9 23	,,	+ ·05	16	AW	13 20	3 24	+ ·03	24	C	19 42	7 2	− ·05
2		12 11	,,	+ ·05	16		14 11	,,	·00	24		19 46	,,	− ·04
[illegible]	M	8 51	22 3	− ·07	23	C	14 11	2 46	− ·01	27	JJ	19 42	7 39	+ ·09
[illegible]		9 41	,,	− ·01	27	JW	13 20	4 20	− ·02	27		19 46	,,	+ ·03
7	AW	9 23	23 13	+ ·08	28	AP	13 20	4 20	+ ·06	27		20 7	,,	+ ·03
7		10 4	,,	+ ·01	28		14 11	,,	+ ·02	27		20 16	,,	+ ·08
8	JW	9 23	23 25	− ·08	29	RC	14 11	1 27	+ ·09	Mar. 1	AW	19 42	7 42	− ·06
9	AP	8 4	20 41	+ ·01	29		14 46	,,	+ ·12	1		19 46	,,	− ·07
9		8 51	,,	+ ·02	Dec. 9	C	16 24	2 30	+ ·07	1		19 51	,,	− ·01
9		9 23	,,	+ ·03	11	AP	14 11	1 27	+ ·06	1		19 55	,,	− ·03
11	AP	8 51	22 46	+ ·04	11		14 46	,,	+ ·04	1		20 7	,,	− ·06
11		9 23	,,	+ ·06	11		16 24	,,	+ ·12	1		20 16	,,	+ ·02
11		10 4	,,	+ ·06						2	S	19 46	7 35	− ·14
12	AW	9 23	22 45	+ ·03	1911.					Apr. 2	RC	21 42	8 29	·00
12		10 4	,,	+ ·11	Jan. 17	JJ	18 0	3 50	+ ·05	2		22 1	,,	+ ·02
13		12 58	,,	+ ·16	17		18 49	,,	·00	6	C	22 53	7 54	− ·10
13		13 20	,,	+ ·09	22	AP	17 31	5 43	+ ·09	7		2 58	,,	− ·05
16	C	9 23	21 28	+ ·06	22		17 39	,,	+ ·01	10	JJ	22 53	7 52	− ·06
16		10 4	,,	+ ·06	23	AW	18 15	5 39	·00	11		2 58	,,	+ ·03
18	C	9 23	23 18	+ ·01	23		18 22	,,	·00	11	C	22 53	7 58	− ·03
18		10 4	,,	+ ·01	23		18 50	,,	+ ·04	12		2 58	,,	− ·03
19	AP	9 23	22 40	+ ·01	24		21 40	,,	− ·04	24	AW	4 31	8 17	+ ·07
19		10 4	,,	− ·02	25	M	21 40	4 53	− ·10	28	C	0 39	9 57	− ·04

TABLE VII.—*continued.*

Date.	Observer.	S.T. of Day Obs.	Mean S.T. of Night Obs.	Diff. Day—Night.	Date.	Observer.	S.T. of Day Obs.	Mean S.T. of Night Obs.	Diff. Day—Night.	Date.	Observer.	S.T. of Day Obs.	Mean S.T. of Night Obs.	Diff. Day—Night.
1911.		h m	h m	s	1911.		h m	h m	s	1911.		h m	h m	s
May 4	C	0 39	12 6	+0·01	June 28	AP	8 4	12 41	0·00	Aug. 30	JJ	12 11	20 6	0·00
5		4 31	,,	+ ·05	28	C	5 10	15 12	+ ·01	30	M	7 21	18 16	+ ·09
5	JJ	0 39	9 1	− ·09	28		5 20	,,	+ ·08	30		7 40	,,	+ ·05
8	AW	0 9	11 48	+ ·07	29		7 40	,,	+ ·05	30		8 4	,,	+ ·04
8		1 50	,,	+ ·11	29	AW	5 44	14 53	+ ·01	31	AW	9 23	19 33	+ ·07
8		2 2	,,	+ ·13	29		5 50	,,	+ ·05	31		10 4	,,	+ ·17
9		5 32	,,	+ ·05	30		9 23	,,	+ ·03	Sept. 5	S	10 4	18 59	− ·03
10	M	5 10	11 54	+ ·06	July 2	S	5 44	12 54	+ ·09	6	AW	9 23	18 42	·00
10		5 20	,,	+ ·04	2		5 50	,,	+ ·10	6		10 4	,,	+ ·06
10		5 27	,,	+ ·04	3	AW	6 19	15 29	+ ·02	8	C	8 21	20 25	+ ·04
11	JJ	5 10	10 27	+ ·03	4		9 23	,,	+ ·03	8		9 23	,,	·00
11		5 20	,,	+ ·03	4		10 4	,,	+ ·05	12	AW	9 23	19 16	+ ·09
11		5 27	,,	− ·02	7	JJ	9 23	15 33	+ ·02	12		10 4	,,	+ ·08
11		5 31	,,	+ ·01	7		10 4	,,	+ ·04	19	RC	10 4	20 10	+ ·10
12	RC	5 20	9 12	·00	7	C	5 10	13 29	+ ·01	28	C	11 10	20 34	·00
12		5 27	,,	− ·04	7		5 20	,,	+ ·01	29	JJ	10 4	19 57	+ ·05
16	AW	5 10	9 21	+ ·04	10	C	9 23	13 10	+ ·10	Oct. 2	M	10 4	20 47	+ ·07
16		5 20	,,	+ ·02	10		10 4	,,	+ ·12	2		11 10	,,	+ ·04
16		5 44	,,	+ ·06	17	AP	9 23	15 57	+ ·02	2		11 45	,,	+ ·03
16		5 50	,,	+ ·06	17		10 4	,,	− ·04	4	RC	11 45	19 53	+ ·09
21	AP	2 58	21 44	+ ·04	18	JJ	9 23	16 0	− ·01	6	AW	11 10	21 0	+ ·04
22		5 10	,,	+ ·08	18		10 4	,,	+ ·01	6		12 11	,,	+ ·05
22		5 20	,,	+ ·12	19	RC	9 23	15 49	− ·02	19	JJ	12 11	21 44	+ ·02
22		5 43	,,	+ ·10	19		10 4	,,	− ·01	20	M	11 45	21 37	+ ·02
22		5 50	,,	+ ·10	27	AP	5 50	16 29	+ ·13	20		12 25	,,	+ ·04
22	C	2 58	21 52	+ ·05	27		6 19	,,	+ ·04	24	C	13 21	22 19	− ·02
23		5 10	,,	− ·02	27		6 32	,,	+ ·13	25	JJ	11 45	22 12	− ·06
23		5 20	,,	− ·01	31	S	10 4	15 42	+ ·03	31	S	11 45	23 9	− ·16
26	M	2 2	21 52	− ·03	31		11 9	,,	+ ·03	Nov. 8	RC	11 45	2 33	·00
26		2 58	,,	·00	Aug. 8	AW	10 45	16 50	·00	8		12 11	,,	+ ·01
June 1	M	6 19	21 47	− ·01	8		11 9	,,	+ ·08	13	C	12 11	1 31	+ ·05
1		6 33	,,	+ ·03	8		11 15	,,	− ·05	13		13 20	,,	·00
1		6 55	,,	+ ·04	8		11 29	,,	− ·03	14	AP	13 20	1 31	+ ·06
1		7 5	,,	+ ·01	13	M	6 33	16 39	+ ·07	14		14 12	,,	+ ·12
15	JJ	4 31	0 0	+ ·04	13		6 55	,,	+ ·07	16	JJ	12 58	4 20	+ ·08
18	AP	4 31	14 53	+ ·02	13		7 5	,,	+ ·14	16		13 20	,,	+ ·05
20	C	4 31	14 19	+ ·02	18	RC	11 29	17 41	+ ·04	17	RC	13 14	4 32	+ ·04
20		5 10	,,	+ ·01	21	AW	9 23	17 58	− ·01	17		13 21	,,	− ·01
21		7 40	,,	+ ·06	22		11 45	,,	+ ·06	20	RC	13 14	4 49	− ·08
26	JJ	8 4	14 40	+ ·01	25	C	7 40	17 29	+ ·04	20		13 21	,,	− ·08
26		8 12	,,	− ·03	25		7 46	,,	+ ·03	22	AW	12 58	1 15	+ ·06
26		9 23	,,	+ ·02	25		8 4	,,	+ ·05	22		13 14	,,	+ ·03
27	AP	4 31	12 41	+ ·07	28	RC	12 6	17 12	− ·02	22		13 21	,,	+ ·02
27		5 10	,,	+ ·13	28		12 11	,,	− ·08	26	JJ	13 21	1 48	+ ·01
28		7 40	,,	+ ·19	29	JJ	9 23	20 6	− ·02	26		13 51	,,	+ ·05

The periodic character of the differences *Day—Night* is at once evident from inspection of this table. In order, however, to subject it to a closer analysis it has been assumed that it is primarily due to a periodic error in the clock-star system used, which may be expressed analytically by the formula

$$\Delta a = A_1 \cos a + B_1 \sin a + A_2 \cos 2a + B_2 \sin 2a.$$

This has further been regarded as possibly associated with a diurnal periodicity, either due to different habits of the observers in daylight observing as contrasted with night observing, or to a diurnal change in the conditions of the transit circle or a diurnal period in the clock rate. Thus each of the differences *Day—Night* has been equated to an expression of the form

$$K+A_1(\cos\alpha_1-\cos\alpha_2)+B_1(\sin\alpha_1-\sin\alpha_2)+A_2(\cos 2\alpha_1-\cos 2\alpha_2)+B_2(\sin 2\alpha_1-\sin 2\alpha_2),$$

where α_1 denotes the R.A. of the day star and α_2 the mean R.A. of the night stars on which the comparison depends. The quantities α_1, α_2 are given under the headings S.T. (sidereal time) of *Day* Observations and Mean S.T. of *Night* Observations in columns 3 and 4 of Table VII. While the quantities A_1, B_1, A_2, B_2 have been regarded as constant throughout the series of observations, the quantity K has been considered as possibly variable with the observer or the method of observing. We give in Table VIII. partial normal equations obtained by grouping the observations according to the observer and the year of observation and combining the separate equations with equal weight.

TABLE VIII.—*Partial Normals for the Determination of Periodic Errors in Right Ascension.*

Observer C.

							v.	*v′.*
			1908.			s	s	s
$30K$	$-6A_1$	$+14B_1$	$-14A_2$	$+3B_2$	=	+0·55	+0·19	+0·04
	+63	+26	−16	−8	=	−0·18	−0·18	−0·02
		+44	−18	−10	=	+1·00	+0·36	+0·05
			+22	0	=	−0·40	−0·01	0·00
				+19	=	−0·54	−0·47	−0·11
			1909.					
$55K$	$+5A_1$	$+10B_1$	$+7A_2$	$+15B_2$	=	+0·04	−0·12	−0·02
	104	−10	−24	−35	=	+0·76	+1·55	+0·15
		87	+4	−3	=	+1·74	+0·39	+0·04
			40	+11	=	−0·24	−0·10	−0·02
				41	=	−0·49	−0·69	−0·11
			1910.					
$20K$	$-16A_1$	$+5B_1$	$+5A_2$	$+4B_2$	=	+0·25	+0·05	+0·01
	33	−2	+6	+6	=	−0·51	−0·11	−0·02
		33	+3	+12	=	+0·49	−0·01	0·00
			21	+9	=	−0·12	+0·09	+0·02
				10	=	+0·09	+0·03	+0·01
			1911.					
$31K$	$+5A_1$	$+23B_1$	$-8A_2$	$-3B_2$	=	+0·40	+0·02	0·00
	43	−2	−4	−3	=	−0·29	+0·07	+0·01
		57	−26	−19	=	+1·28	+0·16	+0·02
			+24	+2	=	−0·61	−0·01	−0·00
				31	=	−0·86	−0·61	−0·11

TABLE VIII.—*continued.*

Observer AP.

						$v.$	$v.'$
			1908.		s	s	s
30K	$-\ 3A_1$	$+\ 36B_1$	$-\ 9A_2$	$-\ 8B_2$	$= -\ 0·13$	$-\ 0·48$	$-\ 0·09$
	44	$+\ 14$	$-\ 11$	$-\ 14$	$= +\ 0·44$	$+\ 0·47$	$+\ 0·07$
		67	$-\ 16$	$-\ 19$	$= +\ 0·82$	$+\ 0·16$	$+\ 0·02$
			9	$+\ 8$	$= -\ 0·18$	$-\ 0·03$	$-\ 0·01$
				17	$= -\ 0·42$	$-\ 0·27$	$-\ 0·07$
			1909.				
49K	$+\ 20A_1$	$-\ 4B_1$	$+\ 10A_2$	$+\ 5B_2$	$= -\ 1·38$	$-\ 0·56$	$-\ 0·08$
	92	$-\ 15$	$-\ 4$	$-\ 22$	$= -\ 2·23$	$-\ 1·06$	$-\ 0·11$
		88	$-\ 5$	$+\ 1$	$= +\ 1·89$	$+\ 0·37$	$+\ 0·04$
			16	$+\ 3$	$= -\ 0·15$	$+\ 0·15$	$+\ 0·04$
				19	$= +\ 0·19$	$+\ 0·06$	$+\ 0·01$
			1910.				
47K	$-\ 34A_1$	$+\ 17B_1$	$-\ 27A_2$	$+\ 9B_2$	$= +\ 1·40$	$+\ 1·04$	$+\ 0·15$
	59	$-\ 12$	$-\ 7$	$-\ 4$	$= -\ 1·82$	$-\ 1·55$	$-\ 0·20$
		79	$-\ 29$	$+\ 22$	$= +\ 2·13$	$+\ 0·72$	$+\ 0·08$
			71	$-\ 14$	$= -\ 1·96$	$-\ 1·12$	$-\ 0·13$
				25	$= +\ 0·70$	$+\ 0·27$	$+\ 0·05$
			1911.				
24K	$+\ 1A_1$	$+\ 8B_1$	$-\ 11A_2$	$+\ 3B_2$	$= +\ 1·42$	0·00	0·00
	17	$+\ 5$	$-\ 3$	$-\ 1$	$= -\ 0·14$	$-\ 0·15$	$-\ 0·04$
		58	$-\ 25$	$+\ 7$	$= +\ 1·31$	$-\ 0·17$	$-\ 0·02$
			22	$-\ 12$	$= -\ 1·37$	$-\ 0·24$	$-\ 0·05$
				21	$= +\ 0·24$	$-\ 0·15$	$-\ 0·03$

Observer RC.

			1908.				
18K	$-\ 3A_1$	$+\ 22B_1$	$-\ 6A_2$	$-\ 5B_2$	$= +\ 0·29$	$-\ 0·22$	$-\ 0·05$
	$+\ 26$	$+\ 2$	$-\ 10$	$-\ 2$	$= -\ 0·39$	$-\ 0·28$	$-\ 0·06$
		38	$-\ 6$	$-\ 13$	$= +\ 0·14$	$-\ 0·56$	$-\ 0·09$
			13	$+\ 2$	$= +\ 0·01$	$+\ 0·17$	$+\ 0·05$
				10	$= +\ 0·05$	$+\ 0·26$	$+\ 0·08$
			1909.				
29K	$-\ 6A_1$	$+\ 10B_1$	$+\ 6A_2$	$+\ 4B_2$	$= +\ 0·09$	$-\ 0·20$	$-\ 0·04$
	31	$-\ 8$	$-\ 4$	$-\ 13$	$=\ 0·00$	$+\ 0·38$	$+\ 0·07$
		60	$+\ 10$	$+\ 1$	$= +\ 1·06$	$+\ 0·15$	$+\ 0·02$
			27	$+\ 7$	$= -\ 0·02$	$+\ 0·05$	$+\ 0·01$
				23	$= +\ 0·27$	$+\ 0·19$	$+\ 0·04$
			1910.				
38K	$+\ 5A_1$	$+\ 5B_1$	$-\ 7A_2$	$-\ 8B_2$	$= +\ 0·74$	$+\ 0·45$	$+\ 0·07$
	39	$+\ 1$	$-\ 8$	$-\ 16$	$= -\ 1·21$	$-\ 0·99$	$-\ 0·16$
		45	$+\ 9$	$+\ 31$	$= +\ 0·28$	$-\ 0·34$	$-\ 0·05$
			62	$+\ 22$	$= -\ 0·78$	$-\ 0·31$	$-\ 0·04$
				55	$= +\ 0·37$	$+\ 0·01$	0·00
			1911.				
22K	$-\ 8A_1$	$-\ 10B_1$	$+\ 18A_2$	$-\ 6B_2$	$= -\ 0·18$	0·00	0·00
	23	$-\ 2$	$-\ 21$	$+\ 7$	$= -\ 0·09$	$-\ 0·06$	$-\ 0·01$
		40	$-\ 2$	$+\ 6$	$= +\ 0·51$	$-\ 0·08$	$-\ 0·01$
			32	$-\ 7$	$= -\ 0·07$	$+\ 0·04$	$+\ 0·01$
				15	$= +\ 0·17$	$+\ 0·08$	$+\ 0·02$

TABLE VIII.—*continued.*

Observer A W.

						v.	*v.'*
			1908.			s	s
41K	+ 5A_1	+ 50B_1	− 24A_2	− 5B_2	= + 1·08	− 0·69	− 0·10
	63	+ 19	− 32	− 7	= + 0·27	+ 0·10	+ 0·01
		79	− 30	− 19	= + 1·42	− 0·89	− 0·10
			41	+ 7	= − 0·69	+ 0·38	+ 0·06
				20	= − 0·12	+ 0·26	+ 0·06
			1909				
34K	+ 14A_1	− 34B_1	+ 2A_2	+ 3B_2	= − 0·03	− 0·07	− 0·01
	67	− 14	+ 15	+ 3	= − 0·42	− 0·23	− 0·03
		56	− 4	− 5	= + 0·33	+ 0·02	0·00
			12	+ 1	= − 0·27	0·00	0·00
				19	= + 0·53	+ 0·57	+ 0·13
			1910				
54K	− 19A_1	+ 21B_1	− 20A_2	− 1B_2	= + 2·48	+ 0·72	+ 0·10
	73	− 25	+ 18	− 18	= − 2·23	− 0·66	− 0·08
		76	− 10	+ 43	= + 2·24	+ 0·36	+ 0·04
			91	− 8	= − 1·63	+ 0·01	0·00
				55	= + 0·86	− 0·02	0·00
			1911				
49K	+ 4A_1	+ 0B_1	+ 16A_2	− 13B_2	= + 0·83	0·00	0·00
	55	− 26	− 25	+ 11	= − 0·86	− 0·36	− 0·05
		99	+ 9	− 19	= + 1·98	+ 0·39	+ 0·04
			49	− 22	= + 0·37	+ 0·21	+ 0·03
				39	= + 0·10	+ 0·49	+ 0·08

Observer M.

			1908.				
35K	+ 8A_1	+ 42B_1	− 18A_2	− 16B_2	= + 0·05	+ 0·09	+ 0·02
	45	+ 12	− 25	− 3	= + 0·44	+ 0·56	+ 0·09
		75	− 23	− 32	= + 0·21	− 0·10	− 0·01
			33	+ 8	= − 0·59	− 0·52	− 0·09
				23	= − 0·c9	+ 0·07	+ 0·02
			1909.				
16K	− 5A_1	− 18B_1	− 3A_2	+ 4B_2	= − 0·56	− 0·01	0·00
	14	− [illegible]	+ 5	+ 1	= 0·00	+ 0·09	− 0·02
		36	+ 8	+ 4	= + 0·90	+ 0·03	+ 0·01
			18	+ 3	= + 0·50	+ 0·54	+ 0·13
				13	= − 0·04	+ 0·02	+ 0·01
			1910.				
39K	+ 5A_1	+ 7B_1	+ 3A_2	− 1B_2	= − 0·91	− 0·07	− 0·01
	54	− 4	+ 2	− 10	= − 0·50	+ 0·16	+ 0·02
		50	+ 20	+ 16	= + 0·75	+ 0·33	+ 0·05
			37	− 11	= + 0·09	+ 0·26	+ 0·04
				77	= + 0·94	+ 0·43	+ 0·05
			1911.				
24K	− 9A_1	+ 20B_1	− 2A_2	+ 3B_2	= + 0·72	− 0·02	0·00
	25	− 21	− 9	− 8	= − 0·40	+ 0·16	+ 0·03
		52	− 12	+ 6	= + 1·44	+ 0·09	+ 0·01
			26	− 6	= − 0·32	+ 0·08	+ 0·02
				19	= − 0·13	− 0·40	− 0·09

TABLE VIII.—*continued.*

Observer JJ.

						v.	*v′.*
			1908				
					s	s	s
$27K$	− $12A_1$	+ $28B_1$	− $7A_2$	+ $0B_2$	= + 0·89	− 0·01	0·00
	49	− 2	− 13	− 8	= − 0·19	+ 0·27	+ 0·04
		53	− 7	− 8	= + 0·93	− 0·28	− 0·04
			14	+ 1	= − 0·40	− 0·19	− 0·05
				7	= − 0·08	− 0·02	− 0·01
			1909				
$54K$	+ $9A_1$	+ $20B_1$	− $4A_2$	− $3B_2$	= + 0·76	− 0·15	− 0·02
	67	+ 12	− 12	− 17	= − 0·25	− 0·08	− 0·01
		106	0	− 4	= + 1·44	− 0·27	− 0·03
			33	+ 21	= + 0·04	+ 0·32	+ 0·06
				45	= − 0·15	·00	0·00
			1910				
$19K$	+ $6A_1$	− $18B_1$	− $3A_2$	− $2B_2$	= + 0·15	+ 0·21	+ 0·05
	18	+ 8	− 1	− 6	= + 0·21	+ 0·16	+ 0·04
		40	+ 14	− 4	= + 0·24	+ 0·08	+ 0·01
			31	− 6	= + 0·27	+ 0·41	+ 0·08
				11	= − 0·05	− 0·09	− 0·03
			1911				
$37K$	− $1A_1$	− $12B_1$	+ $7A_2$	− $2B_2$	= + 0·25	+ 0·01	0·00
	40	− 18	− 9	− 1	= − 0·37	+ 0·16	+ 0·03
		72	− 9	− 21	= − 0·07	− 1·21	− 0·14
			32	− 13	= − 0·27	+ 0·04	+ 0·01
				45	= 0·00	+ 0·17	+ 0·03

Observer JW.

			1908.				
$19K$	− $10A_1$	+ $8B_1$	− $3A_2$	− $1B_2$	= 0·00	− 0·05	− 0·01
	35	+ 13	− 2	− 1	= + 0·49	+ 0·48	+ 0·08
		40	− 0	− 3	= + 0·36	− 0·04	− 0·01
			2	− 1	= − 0·03	− 0·06	− 0·04
				6	= − 0·02	− 0·01	0·00
			1909.				
$23K$	+ $24A_1$	− $4B_1$	− $5A_2$	− $6B_2$	= − 0·41	+ 0·03	+ 0·01
	37	− 5	− 1	+ 1	= − 0·37	+ 0·24	+ 0·04
		45	− 10	+ 1	= + 1·01	+ 0·16	+ 0·02
			9	+ 7	= + 0·11	+ 0·29	+ 0·09
				9	= + 0·11	+ 0·11	+ 0·04
			1910.				
$35K$	− $12A_1$	− $15B_1$	+ $11A_2$	− $21B_2$	= − 0·66	− 0·07	− 0·01
	64	+ 30	+ 2	− 3	= + 0·04	+ 0·04	+ 0·01
		36	+ 9	+ 7	= + 0·22	− 0·11	− 0·02
			37	− 4	= − 0·52	− 0·14	− 0·02
				33	= + 0·50	+ 0·10	+ 0·02

TABLE VIII.—*continued.*

Observer S.

											v.	v'.
				1911.						s	s	s
$7K$	$-$	$1A_1$	$+$	$4B_1$	$-$	$1A_2$	$-$	$4B_2$	$=$	-0.08	$+0.01$	0.00
		8	$-$	3	$-$	4		0	$=$	$+0.44$	$+0.49$	$+0.17$
				11	$-$	1	$-$	5	$=$	$+0.45$	$+0.35$	$+0.10$
						11	$-$	1	$=$	-0.32	-0.25	-0.07
								5	$=$	-0.17	-0.21	-0.09

For the further combination of these equations the observations in the different years were first treated independently. By means of the normal in K, the quantity K was first eliminated, and reduced partial normals in A_1, B_1, A_2, B_2 were derived. The reduced partial normals for the separate observers were then combined by addition and the resulting complete normals solved. The results for the separate years are as follows :—

TABLE IX.—*Coefficients of Periodic Errors in the Clock-Star System.*

	A_1.	B_1.	A_2.	B_2.
	s	s	s	s
1908	-0.0057	$+0.0122$	-0.0155	-0.0046
1909	$+.0020$	$+.0177$	$-.0005$	$+.0047$
1910	$-.0149$	$+.0165$	$-.0103$	$+.0010$
1911	$-.0090$	$+.0122$	$-.0148$	$-.0069$

The observations made by each observer during the years 1908–10 were next regarded as furnishing homogeneous groups, which were combined among themselves in like manner, those of 1911 however being excluded, as a different method of observing was used in this year. The results from the separate groups are as follows :—

TABLE IXA.—*Coefficients of Periodic Errors in Clock-Star System (1908–10) grouped according to Observers.*

Observer.	A_1.	B_1.	A_2.	B_2.
	s	s	s	s
C	-0.0073	$+0.0181$	-0.0154	-0.0237
AP	$-.0231$	$+.0176$	$-.0234$	$-.0079$
RC	$-.0172$	$+.0080$	$-.0137$	$+.0058$
AW	$-.0095$	$+.0118$	$-.0082$	$+.0092$
M	$.0000$	$+.0164$	$-.0052$	$+.0066$
JJ	$-.0037$	$+.0111$	$-.0003$	$-.0024$
JW	$-.0026$	$+.0127$	$-.0086$	$+.0053$

According to either method of grouping, the values of the quantities A_1, B_1, A_2, B_2 appear to be persistent, indicating real periodic errors in the Cape Ledger system. The definitive values have been derived by combining by addition all the reduced partial normals A_1, B_1, A_2, B_2, which result after the elimination of K from each homogeneous group. The final complete normals are as follows:—

$$\begin{array}{rrrrcl}
1275\,A_1 & -\ 18\,B_1 & -194\,A_2 & -168\,B_2 & = & -\ \overset{s}{9{\cdot}08} \\
-\ 18\,A_1 & +1498\,B_1 & -\ 92\,A_2 & -\ 27\,B_2 & = & +23{\cdot}29 \\
-\ 194\,A_1 & -\ 92\,B_1 & +781\,A_2 & +\ 12\,B_2 & = & -\ 7{\cdot}78 \\
-\ 168\,A_1 & -\ 27\,B_1 & +\ 12\,A_2 & +686\,B_2 & = & +\ 1{\cdot}33
\end{array}$$

with the solution

$$\begin{array}{lcll}
A_1 & = & -\overset{s}{0{\cdot}0085}\ , & \text{weight } 1183, \\
B_1 & = & +0{\cdot}0148\ , & \quad\text{,,} \quad 1486, \\
A_2 & = & -0{\cdot}0103\ , & \quad\text{,,} \quad 741, \\
B_2 & = & +0{\cdot}0006\ , & \quad\text{,,} \quad 663.
\end{array}$$

If we substitute these values in the respective partial normals in K, we derive the following values for K, which represent the personal discordances in time determinations by *day* as compared with those of the mean observer by *night*.

TABLE X.—*Discordances between* Day *and* Night *Determinations of Clock Error (in sense* Day—Night), *grouped according to Observers.*

Day Observer.	Year of Observation.				
	1908.	1909.	1910.	1908–10.	1911.
	s	s	s	s	s
C	+ 0·005	0·000	+ 0·004	+ 0·002	0·000
AP	− ·026	− ·021	+ ·012	− ·010	+ ·050
RC	− ·007	− ·002	+ ·017	+ ·005	+ ·004
AW	+ ·004	+ ·018	+ ·033	+ ·020	+ ·021
M	− ·019	− ·023	− ·024	− ·022	+ ·014
JJ	+ ·012	+ ·009	+ ·023	+ ·012	+ ·013
JW	− ·008	− ·009	− ·012	− ·010	...
S	...	...	...	...	− ·024.
Mean	− ·0056	− ·0040	+ ·0076	− ·0004	+ ·0110

The quantities here derived, except in so far as they are due to purely accidental causes, may be attributed in part to personal and partly to instrumental causes. If we give equal weight to the determinations in each of the four years involved, the mean result derived from all the observations amounts only to $+0{\cdot}^{s}0023$ for the mean observer. It follows that there can be little or no danger of the determinations of the periodic errors in R.A. being vitiated by periodic errors due to diurnal changes in the instrument or the clock.

The quantities contained in the two final columns of Table X. have been adopted as definitive, and, together with the finally derived values of A_1, B_1, A_2, B_2, have been substituted in the original equations of condition. From the sum of the squares of the residuals thus formed the probable accidental error corresponding to weight unity has been derived as $\pm 0^s{\cdot}031$; whence, with the weights derived, the probable accidental errors of A_1, B_1, A_2, B_2, amount to $\pm 0^s{\cdot}0009$, $\pm 0^s{\cdot}0008$, $\pm 0^s{\cdot}0011$, $\pm 0^s{\cdot}0012$. The agreement between the derived values of these same quantities from the groups of observations, either arranged according to time or according to the observers, does not confirm this high estimate of the precision, doubtless on account of cumulative systematic errors. To obtain a more reliable estimate of the probable errors, both accidental and systematic, of the results, the derived values have been substituted in the partial normals (Table VIII.) ; the residuals are given in the last column but one of this Table. Now it is evident that if any one of these partial normals be written in the symbolical form

$$(aa)x+(ab)y+(ac)z+ \; . \; . \; . \; . \; =(an),$$

where each of the quantities n is of weight unity, the square of the mean error of the absolute term will be $(aa)\epsilon^2$, ϵ denoting the mean error corresponding to unit weight.

Hence we may reduce the equations to equal weight unity by multiplying by the factor $1/\sqrt{(aa)}$. The final column in Table VIII. gives the residuals from the equations thus reduced.

Now if the quantities thus obtained represented true errors, instead of residual phenomena, since each has the same weight unity, the mean of their squares would give a determination of the square of the mean error for unit weight, but in that the derived phenomena depend on the equations themselves, we may anticipate that the average residual will be less than the average error.

On the other hand, the sum of the squares of the residuals will exceed that which would be derived from a least square combination of the partial normal equations regarded as equations of condition. But, according to the usual conventions of least squares, if Σv^2 denote the sum of the squares of the residuals, m the number of equations, and n the number of unknown quantities,

$$m\epsilon^2=\Sigma v^2+n\epsilon^2.$$

Hence if v' denote residuals from a solution other than a least square solution,

$$m\epsilon^2<\Sigma v'^2+n\epsilon^2.$$

Applying this formula to the present case, a superior limit to the probable error corresponding to unit weight is found to be $\pm 0^s{\cdot}043$ and the corresponding probable errors of A_1, B_1 do not exceed $\pm 0^s{\cdot}0013$, those of A_2, B_2, $\pm 0^s{\cdot}0018$.

On the basis of this determination the probable error, inclusive of residual systematic error, as well as purely accidental error of the quantity

$$A_1 \cos \alpha + B_1 \sin \alpha + A_2 \cos 2\alpha + B_2 \sin 2\alpha,$$

amounts at a maximum in any right ascension to $\pm 0^s{\cdot}0022$.

As regards the actual values derived for the coefficients A_1, B_1, A_2, B_2, confirmation has been sought from comparison with approximately simultaneous series of observations made in other observatories, with results that support the values here derived (see *Monthly Notices*, January 1913). For the purposes of the present Catalogue it has, however, been thought desirable, in order to maintain its fundamental character, to avoid the introduction of extraneous evidence.

Thus the definitive corrections which have been applied to the Ledger right ascensions in order to eliminate the errors in the system of right ascension originally adopted for their formation are

$$\Delta\alpha = +0^s{\cdot}0085 \cos \alpha - 0^s{\cdot}0148 \sin \alpha + 0^s{\cdot}0103 \cos 2\alpha - 0^s{\cdot}0006 \sin 2\alpha.$$

For reasons which will be discussed later no constant correction has been applied. Thus the equinox of reference corresponds with that of Newcomb's Catalogue.

II.—REVISION OF DECLINATION SYSTEM.

The declinations in the Ledgers have been derived from the nadir readings, with the Pulkowa refractions and with an assumed value for the mean latitude of the transit circle, viz. :—

$$-33^\circ \quad 56' \quad 2''{\cdot}5.$$

Except for the year 1911, they have received corrections on account of the motion of the Earth's axis from data supplied by Albrecht from the latitude determinations at the International Geodetic Stations. The same applies to the time stars of 1911, but not to the circumpolar stars, the observations of which are contained in a separate ledger, and which have formed the subject of a special discussion (*Cape Annals*, vol. xi., part iii.). No corrections for instrumental flexure have been applied prior to the formation of the Ledgers.

Before considering the corrections on account of latitude and flexure, a comparison was first made between the results derived in the four conditions of the instrument I. E., I. W., II. E., II. W. A summary of this comparison, based on observations during the years 1905–10, is given in the following tables.

TABLE XI.—*Comparison of Declinations with opposite positions of the Clamp.*

Position I. $\Delta\delta$ (E – W).

Mean Dec.	0^h–4^h.	4^h–8^h.	8^h–12^h.	12^h–16^h.	16^h–20^h.	20^h–0^h.	Mean.
°	"	"	"	"	"	"	"
+ 27	$+0{\cdot}17_{34}$	$+0{\cdot}47_{27}$	$+0{\cdot}15_{18}$	$-0{\cdot}02_{19}$	$+0{\cdot}11_{31}$	$+0{\cdot}24_{25}$	$+0{\cdot}196_{154}$
+ 15	$+0{\cdot}26_{16}$	$+0{\cdot}39_{21}$	$+0{\cdot}30_{22}$	$+0{\cdot}11_{17}$	$+0{\cdot}16_{20}$	$+0{\cdot}38_{14}$	$+0{\cdot}267_{110}$
+ 5	$+0{\cdot}37_{27}$	$+0{\cdot}48_{17}$	$+0{\cdot}32_{25}$	$-0{\cdot}01_{11}$	$+0{\cdot}29_{18}$	$+0{\cdot}36_{18}$	$+0{\cdot}325_{116}$
− 5	$+0{\cdot}43_{16}$	$+0{\cdot}50_{19}$	$+0{\cdot}24_{13}$	$-0{\cdot}01_{17}$	$+0{\cdot}06_{12}$	$+0{\cdot}43_{24}$	$+0{\cdot}300_{101}$
− 15	$+0{\cdot}38_{10}$	$+0{\cdot}43_{15}$	$+0{\cdot}32_{11}$	$+0{\cdot}16_{22}$	$+0{\cdot}26_{13}$	$+0{\cdot}34_{20}$	$+0{\cdot}303_{91}$
− 25	$+0{\cdot}35_{16}$	$+0{\cdot}55_{19}$	$+0{\cdot}53_{9}$	$+0{\cdot}17_{15}$	$+0{\cdot}27_{24}$	$+0{\cdot}46_{19}$	$+0{\cdot}378_{102}$
− 35	$+0{\cdot}27_{13}$	$+0{\cdot}37_{16}$	$+0{\cdot}33_{10}$	$+0{\cdot}22_{14}$	$+0{\cdot}28_{16}$	$+0{\cdot}30_{14}$	$+0{\cdot}295_{83}$
− 45	$+0{\cdot}34_{26}$	$+0{\cdot}57_{24}$	$+0{\cdot}51_{27}$	$+0{\cdot}24_{31}$	$+0{\cdot}31_{28}$	$+0{\cdot}48_{18}$	$+0{\cdot}396_{154}$
− 55	$+0{\cdot}25_{13}$	$+0{\cdot}52_{16}$	$+0{\cdot}37_{19}$	$+0{\cdot}39_{14}$	$+0{\cdot}49_{12}$	$+0{\cdot}30_{14}$	$+0{\cdot}388_{88}$
− 65	$+0{\cdot}46_{13}$	$+0{\cdot}65_{7}$	$+0{\cdot}36_{12}$	$+0{\cdot}36_{7}$	$+0{\cdot}57_{10}$	$+0{\cdot}51_{12}$	$+0{\cdot}479_{61}$
− 75	$+0{\cdot}40_{11}$	$+0{\cdot}60_{9}$	$+0{\cdot}45_{8}$	$+0{\cdot}16_{8}$	$-0{\cdot}02_{6}$	$+0{\cdot}47_{7}$	$+0{\cdot}364_{49}$
− 85	$+0{\cdot}30_{4}$	$+0{\cdot}49_{5}$	$+0{\cdot}53_{3}$	$+0{\cdot}43_{4}$	$+0{\cdot}07_{4}$	$+0{\cdot}34_{4}$	$+0{\cdot}359_{24}$
− 95	$+0{\cdot}10_{4}$	$+0{\cdot}49_{3}$	$+0{\cdot}35_{4}$	$+0{\cdot}07_{4}$	$-0{\cdot}07_{5}$	$0{\cdot}00_{2}$	$+0{\cdot}145_{22}$
−105	$+0{\cdot}62_{5}$	$+0{\cdot}69_{2}$	$+1{\cdot}00_{2}$	$+0{\cdot}40_{5}$	$+0{\cdot}37_{1}$	$+0{\cdot}53_{4}$	$+0{\cdot}578_{19}$

Position II. $\Delta\delta$ (E – W).

+ 27	$+0{\cdot}48_{34}$	$+0{\cdot}45_{27}$	$+0{\cdot}19_{18}$	$+0{\cdot}12_{19}$	$+0{\cdot}17_{31}$	$+0{\cdot}21_{25}$	$+0{\cdot}291_{154}$
+ 15	$+0{\cdot}65_{16}$	$+0{\cdot}53_{21}$	$+0{\cdot}33_{22}$	$+0{\cdot}27_{17}$	$+0{\cdot}24_{20}$	$+0{\cdot}24_{14}$	$+0{\cdot}378_{110}$
+ 5	$+0{\cdot}52_{27}$	$+0{\cdot}27_{17}$	$+0{\cdot}43_{25}$	$+0{\cdot}30_{11}$	$+0{\cdot}40_{18}$	$+0{\cdot}51_{19}$	$+0{\cdot}424_{117}$
− 5	$+0{\cdot}63_{16}$	$+0{\cdot}39_{20}$	$+0{\cdot}44_{13}$	$+0{\cdot}20_{17}$	$+0{\cdot}39_{12}$	$+0{\cdot}37_{24}$	$+0{\cdot}398_{102}$
− 15	$+0{\cdot}49_{10}$	$+0{\cdot}44_{14}$	$+0{\cdot}39_{11}$	$+0{\cdot}33_{22}$	$+0{\cdot}47_{13}$	$+0{\cdot}46_{20}$	$+0{\cdot}421_{90}$
− 25	$+0{\cdot}62_{16}$	$+0{\cdot}38_{19}$	$+0{\cdot}41_{9}$	$+0{\cdot}36_{15}$	$+0{\cdot}45_{24}$	$+0{\cdot}62_{18}$	$+0{\cdot}477_{101}$
− 35	$+0{\cdot}43_{13}$	$+0{\cdot}49_{16}$	$+0{\cdot}34_{10}$	$+0{\cdot}33_{14}$	$+0{\cdot}37_{16}$	$+0{\cdot}47_{15}$	$+0{\cdot}410_{84}$
− 45	$+0{\cdot}40_{26}$	$+0{\cdot}52_{24}$	$+0{\cdot}22_{27}$	$+0{\cdot}31_{31}$	$+0{\cdot}33_{28}$	$+0{\cdot}31_{17}$	$+0{\cdot}346_{153}$
− 55	$+0{\cdot}52_{13}$	$+0{\cdot}34_{16}$	$+0{\cdot}23_{19}$	$+0{\cdot}19_{14}$	$+0{\cdot}29_{12}$	$+0{\cdot}30_{14}$	$+0{\cdot}306_{88}$
− 65	$+0{\cdot}33_{13}$	$+0{\cdot}21_{7}$	$+0{\cdot}31_{12}$	$+0{\cdot}26_{7}$	$+0{\cdot}17_{10}$	$+0{\cdot}33_{12}$	$+0{\cdot}278_{61}$
− 75	$+0{\cdot}39_{11}$	$+0{\cdot}32_{9}$	$-0{\cdot}06_{8}$	$+0{\cdot}19_{8}$	$+0{\cdot}23_{6}$	$+0{\cdot}16_{7}$	$+0{\cdot}219_{49}$
− 85	$+0{\cdot}44_{4}$	$+0{\cdot}28_{5}$	$+0{\cdot}19_{3}$	$+0{\cdot}35_{4}$	$-0{\cdot}14_{3}$	$+0{\cdot}17_{4}$	$+0{\cdot}234_{23}$
− 95	$+0{\cdot}64_{4}$	$+0{\cdot}05_{3}$	$+0{\cdot}20_{3}$	$+0{\cdot}19_{4}$	$+0{\cdot}19_{3}$	$+0{\cdot}10_{3}$	$+0{\cdot}247_{20}$
−105	$+0{\cdot}48_{5}$	$+0{\cdot}85_{2}$	$+0{\cdot}24_{2}$	$+0{\cdot}35_{5}$	$+0{\cdot}39_{1}$	$+0{\cdot}02_{3}$	$+0{\cdot}377_{18}$

Comparison of Declinations with reversed positions of Object Glass and Eye-End.

$\Delta\delta$ (Position I.—Position II.; mean of E and W.)

+ 27	$-0{\cdot}13_{34}$	$-0{\cdot}14_{27}$	$-0{\cdot}31_{18}$	$-0{\cdot}29_{19}$	$-0{\cdot}37_{31}$	$-0{\cdot}22_{25}$	$-0{\cdot}235_{154}$
+ 15	$-0{\cdot}18_{16}$	$-0{\cdot}24_{21}$	$-0{\cdot}23_{22}$	$-0{\cdot}28_{17}$	$-0{\cdot}31_{20}$	$-0{\cdot}24_{15}$	$-0{\cdot}250_{111}$
+ 5	$-0{\cdot}10_{27}$	$+0{\cdot}02_{17}$	$-0{\cdot}08_{25}$	$0{\cdot}00_{11}$	$-0{\cdot}06_{18}$	$-0{\cdot}15_{18}$	$-0{\cdot}070_{116}$
− 5	$-0{\cdot}03_{16}$	$+0{\cdot}05_{20}$	$-0{\cdot}01_{13}$	$-0{\cdot}08_{17}$	$+0{\cdot}01_{12}$	$-0{\cdot}07_{23}$	$-0{\cdot}024_{101}$
− 15	$-0{\cdot}16_{10}$	$+0{\cdot}06_{14}$	$+0{\cdot}01_{11}$	$-0{\cdot}01_{22}$	$-0{\cdot}01_{13}$	$-0{\cdot}07_{20}$	$-0{\cdot}027_{90}$
− 25	$+0{\cdot}12_{16}$	$+0{\cdot}13_{19}$	$+0{\cdot}06_{9}$	$+0{\cdot}10_{15}$	$+0{\cdot}08_{24}$	$-0{\cdot}01_{19}$	$+0{\cdot}080_{102}$
− 35	$+0{\cdot}06_{13}$	$+0{\cdot}10_{16}$	$+0{\cdot}02_{10}$	$+0{\cdot}26_{14}$	$+0{\cdot}19_{16}$	$0{\cdot}00_{14}$	$+0{\cdot}113_{83}$
− 45	$+0{\cdot}10_{26}$	$+0{\cdot}14_{24}$	$+0{\cdot}10_{27}$	$+0{\cdot}10_{31}$	$+0{\cdot}21_{28}$	$+0{\cdot}01_{19}$	$+0{\cdot}112_{155}$
− 55	$+0{\cdot}21_{13}$	$+0{\cdot}22_{16}$	$+0{\cdot}13_{19}$	$+0{\cdot}24_{14}$	$+0{\cdot}15_{12}$	$+0{\cdot}17_{13}$	$+0{\cdot}185_{87}$
− 65	$+0{\cdot}20_{13}$	$+0{\cdot}27_{7}$	$+0{\cdot}18_{12}$	$+0{\cdot}27_{7}$	$+0{\cdot}32_{10}$	$+0{\cdot}10_{12}$	$+0{\cdot}212_{61}$
− 75	$+0{\cdot}26_{11}$	$+0{\cdot}20_{9}$	$+0{\cdot}14_{8}$	$-0{\cdot}06_{8}$	$+0{\cdot}17_{6}$	$+0{\cdot}20_{7}$	$+0{\cdot}158_{49}$
− 85	$+0{\cdot}33_{4}$	$+0{\cdot}46_{5}$	$+0{\cdot}29_{3}$	$+0{\cdot}40_{4}$	$+0{\cdot}23_{3}$	$+0{\cdot}18_{5}$	$+0{\cdot}320_{24}$
− 95	$+0{\cdot}14_{4}$	$+0{\cdot}10_{3}$	$+0{\cdot}46_{3}$	$+0{\cdot}37_{4}$	$+0{\cdot}21_{3}$	$+0{\cdot}20_{2}$	$+0{\cdot}250_{19}$
−105	$+0{\cdot}75_{5}$	$+0{\cdot}28_{2}$	$+0{\cdot}22_{2}$	$+0{\cdot}27_{5}$	$+0{\cdot}01_{1}$	$+0{\cdot}32_{3}$	$+0{\cdot}394_{18}$

The suffixes indicate the number of stars in the group.

Fairly pronounced discordances of a systematic character depending on the zenith distance are clearly indicated. These may be in part accounted for by residual division-errors and by the variations in flexure under the different conditions. The separate determinations of the flexure coefficient by means of the horizontal collimators are given in the Introduction to the *Meridian Observations*. A summary of these is here given :—

TABLE XII.—*Determinations of Mean Flexure Coefficient.*

Year.	I. E.	I. W.	II. E.	II. W.
	″	″	″	″
1905	...	...	+ 0·288	+ 0·363
1906	+ 0·253	+ 0·310	...	...
1907	+ 0·459	+ 0·335	...	...
1908	...	...	+ 0·213	+ 0·137
1909	+ 0·271	+ 0·323	...	...
1910	+ 0·305	+ 0·384	+ 0·061	+ 0·068
1911	+ 0·298	+ 0·384	...	...
Mean	+ 0·317	+ 0·347	+ 0·187	+ 0·189

Within the limits of accidental errors of determination these figures indicate no appreciable change due to reversal between the two clamps, but a strongly marked difference between determinations in Positions I. and II. Accordingly the differences E – W, as given above in Table XI., after being smoothed by graphical interpolation, have been adopted as definitive.

To the difference II–I a correction on account of variation in the flexure coefficient, amounting to $-0''\cdot 14 \sin \zeta$, where ζ denotes the zenith distance, has been applied, and the results then smoothed in like manner.

Denoting the semi-differences $\frac{1}{2}$(II–I) by A, and the semi-difference $\frac{1}{2}$(E–W) by B_{I} or B_{II}, the following table gives the smoothed values for these quantities which have been used :—

Table of Systematic Discordances.

Dec.	A.	B_{I}.	B_{II}.	Dec.	A.	B_{I}	B_{II}.	Dec.	A.	B_{I}.	B_{II}.
°	″	″	″	°	″	″	″	°	″	″	″
+ 35	+0·07	−0·08	−0·12	− 15	−0·04	−0·16	−0·21	− 65	−0·05	−0·21	−0·13
30	+ ·06	− ·10	− ·14	20	− ·04	− ·16	− ·22	70	− ·05	− ·20	− ·12
25	+ ·05	− ·12	− ·16	25	− ·05	− ·17	− ·23	75	− ·05	− ·19	− ·11
20	+ ·04	− ·13	− ·18	30	− ·05	− ·17	− ·22	80	− ·06	− ·18	− ·11
15	+ ·03	− ·14	− ·19	35	− ·05	− ·17	− ·21	85	− ·06	− ·18	− ·11
10	+ ·01	− ·15	− ·20	40	− ·05	− ·17	− ·19	90	− ·07	− ·17	− ·12
+ 5	·00	− ·15	− ·20	45	− ·05	− ·18	− ·18	S.P. 85	+ ·08	+ ·17	+ ·13
0	− ·02	− ·16	− ·20	50	− ·05	− ·19	− ·16	„ 80	+ ·08	+ ·17	+ ·14
− 5	− ·03	− ·15	− ·20	55	− ·05	− ·20	− ·15	„ 75	+ ·09	+ ·18	+ ·16
10	− ·03	− ·15	− ·20	60	− ·05	− ·20	− ·14				

These corrections have to be applied to the observed declinations with the following signs in order to reduce the whole series to a uniform system :—

Position.	Clamp.	$\Delta\delta$.
I.	E.	$A+B_{\text{I.}}$
I.	W.	$A-B_{\text{I.}}$
II.	E.	$-A+B_{\text{II.}}$
II.	W.	$-A-B_{\text{II.}}$

Consider next the latitude corrections. The separate observations have been reduced with the instantaneous nadir reading in combination with an assumed mean latitude and Albrecht's values for the periodic fluctuations of latitude, except in the case of close circumpolar stars observed during 1911. The latter have been separately discussed (*Cape Annals*, xi., part 3), the fluctuations of latitude being derived in this case from the observations themselves. From this discussion it appears that the latitude corrections required to reconcile the above-pole and below-pole observations at the Cape are less than those derived from observations at the International Latitude Stations by $0''\cdot18$ in the mean, or, in other words, the adopted mean latitude used in the reductions requires to be diminished by $0''\cdot18$. In deriving this value, however, no account was taken of the instrumental flexure. For the year in question the mean value of the flexure coefficient was $+0''\cdot34$, giving as the amount of flexure in the neighbourhood of the pole $-0''\cdot28$, in the sense in which it is to be applied to declination observations at upper culmination.

Taking

$$\Delta\delta = \Delta\phi + f \sin\zeta \text{ for stars above pole}$$
$$\Delta\delta = -\Delta\phi - f \sin\zeta \text{ for stars below pole}$$

where $\Delta\delta$ denotes the correction required to the declinations of the Ledgers, $\Delta\phi$ the correction to the adopted latitude, and f the flexure coefficient, the above determinations give

$$\Delta\phi + f\sin\zeta = -0''\cdot18$$
$$f\sin\zeta = -0''\cdot28$$

whence

$$\Delta\phi = +0''\cdot10.$$

The observations during this year were all made with the transit circle in Position I. Now we have already seen that there are small systematic discordances between results obtained in Positions I. and II., amounting at the pole to $+0''\cdot14$, in the sense I–II. We may refer the latitude to the mean system $\frac{1}{2}(\text{I}+\text{II})$ by adding half this difference.

Thus the correction to the adopted latitude, suitable for application to determinations made by symmetrical observations in the two positions, as derived from the observations of circumpolars in the year 1911, is

$$\Delta\phi = +0''\cdot17.$$

When the instrument was used in Position I., in the years 1906–10, direct determinations of flexure indicate that the mean flexure coefficient was sensibly constant. Hence for these years observations of the same star, made in this position of the instrument, have been treated as homogeneous and combined into a single mean. The determinations above and below pole have been thus separately grouped. The mean differences between the results for each star are contained in the following table:—

TABLE XIII.—*Differences between Declinations above and below pole in Cape Ledgers* (1906–10).

Position I.

Star.	Clamp E.		Clamp W.		Star.	Clamp E.		Clamp W.	
	Δδ Above —Below.	Weight.	Δδ Above —Below.	Weight.		Δδ Above —Below.	Weight.	Δδ Above —Below.	Weight.
o Octantis	+ 0″·80	6	+ 0″·75	7	β Chamæleontis	+ 0″·66	2	+ 0″·17	2
β Hydri	− 0·07	2	− 0·34	2	ι Octantis	+ 0·44	8	+ 0·40	8
Lacaille 505	+ 0·63	3	− 0·58	3	κ Octantis	+ 0·96	7	+ 0·16	7
τ¹ Hydri	+ 1·02	2	+ 0·45	2	θ Apodis	+ 1·06	2	− 0·93	2
Lacaille 634	+ 0·72	7	+ 0·26	6	α Apodis	+ 0·18	2	+ 1·03	2
μ Hydri	+ 1·20	2	− 0·11	2	z Octantis	+ 1·15	6	+ 0·10	5
Lacaille 1029	+ 0·94	5	+ 0·41	6	Lacaille 6077	+ 0·86	2	+ 0·33	2
Lacaille 1848	+ 0·94	4	+ 0·24	5	ρ Octantis	+ 0·82	10	+ 0·59	5
ι Hydri	+ 1·58	3	− 0·28	2	δ¹ Apodis	+ 0·74	2	+ 0·68	2
Brisbane 593	+ 0·27	4	+ 0·40	3	γ Apodis	+ 1·37	2	+ 0·25	2
Lacaille 1707	+ 0·90	9	+ 0·44	10	Lacaille 6545	+ 1·47	9	+ 0·83	7
γ Mensæ	+ 0·30	3	− 0·55	2	β Apodis	+ 1·20	3	+ 0·45	2
Lacaille 2296	+ 1·33	9	+ 1·05	7	χ Octantis	+ 1·28	9	+ 0·68	6
κ Mensæ	+ 0·58	3	+ 0·34	2	σ Octantis	+ 0·41	5	− 0·29	3
Lacaille 2512	+ 0·11	6	+ 0·43	4	Lacaille 8094	+ 0·05	5	− 0·32	4
θ Mensæ	+ 0·62	2	+ 0·34	2	Lacaille 8257	+ 0·43	8	+ 0·32	7
Lacaille 3274	+ 1·10	7	+ 0·19	3	μ¹ Octantis	+ 0·67	2	− 0·68	3
A Octantis	+ 0·67	5	− 0·08	3	α Octantis	+ 1·02	2	− 0·48	2
θ Chamæleontis	+ 0·52	3	− 0·48	3	ν Octantis	− 0·41	3	− 0·87	2
η Chamæleontis	+ 0·13	2	− 0·73	2	B Octantis	+ 0·41	3	+ 0·22	3
ζ Octantis	+ 0·84	6	0·00	8	υ (C) Octantis	+ 1·51	7	+ 0·34	4
γ Chamæleontis	+ 1·05	2	+ 0·12	2	τ Octantis	+ 1·43	7	+ 0·15	8
Lacaille 4510	+ 0·58	5	− 0·12	7	Lacaille 9494	+ 1·46	2	− 0·33	3
η Octantis	+ 0·49	7	+ 0·31	5	θ Octantis	+ 0·81	2	− 0·74	3

The weights are derived from the formula

$$\frac{mn}{m+n},$$

where m, n denote the number of observations made respectively at upper and lower culminations. Taking the means with these weights, we find, from Clamp E,

$$\Delta\delta\ (\text{above} - \text{below}) = +0''\cdot 81, \text{ weight } 217;$$

and, from Clamp W,

$$\Delta\delta\ (\text{above} - \text{below}) = +0''\cdot 21, \text{ weight } 192.$$

The difference between these results is in conformity with the discordances already found between declination determinations with reversed clamps. If we had previously applied the corrections represented by A, B_{I} above, the above determinations would have been increased respectively by the values of $2(A \pm B_{\mathrm{I}})$ at the pole. The resulting corrections to the declinations on account of the combined effects of latitude and flexure would then be

$$-0''.40-(A+B_{\mathrm{I}}) = -0''.16 \text{ for Clamp E.}$$
$$-0''.10-(A-B_{\mathrm{I}}) = -0''.20 \text{ for Clamp W.}$$

These results are in reasonably close agreement.

Subtracting the part $-0''.28$ due to flexure alone, we derive from the mean of the two latitude corrections referred to the mean system $[\frac{1}{2}(\mathrm{I}+\mathrm{II}), \frac{1}{2}(\mathrm{E}+\mathrm{W})]$

$$\Delta\phi = +0''.10.$$

The flexure determinations made in Position II. during the years 1905–10 show variations from year to year. Consequently for this position of the instrument a separate investigation on similar lines has been made for each year. Table XIV. gives the results derived from separate stars.

TABLE XIV.—*Differences between Declinations above and below pole in Cape Ledgers* (1905–10).

Position II.

Star.	1905.				1908.				1910.			
	E.		W.		E.		W.		E.		W.	
	Δδ	Wt.	Δδ	Wt.	Δδ	Wt.	Δδ	Wt.	Δδ	Wt.	Δδ	Wt.
o Octantis	+1″·20	1·9	+0″·12	2·0	+0″·32	2·0	−0″·75	1·2	″ ...		″ ...	
β Hydri	...		...		+0·23	1·9	...		...		0·00	1·0
Lacaille 505	−0·25	0·8	−1·27	2·0	...		...		...		...	
τ^1 Hydri	...		...		...		−0·49	1·3	−0·20	0·8	...	
Lacaille 634	−0·01	2·5	−0·28	3·3	−0·29	1·7	−1·01	1·5	...		...	
μ Hydri	...		...		...		−1·02	1·5	+0·28	1·4	−1·00	0·5
Lacaille 1029	+0·24	2·1	−0·33	2·7	−0·72	0·5	+0·17	1·3	...		...	
Lacaille 1848	...		...		...		−1·08	0·5	...		−0·92	0·7
ι Hydri	...		+0·68	0·5	−0·33	1·3	−0·55	2·0	...		...	
Brisbane 593	−0·88	0·5	−0·44	1·0	+0·81	1·5	−0·64	2·0	...		...	
Lacaille 1707	+0·20	2·0	−0·11	1·2	+0·01	3·4	−0·66	3·2	...		...	
γ Mensæ	...		...		−0·94	1·9	−0·87	1·0	...		...	
Lacaille 2296	−0·29	0·9	...		+0·14	2·8	−0·09	1·3	...		...	
κ Mensæ	...		...		+0·33	1·5	+0·48	1·4	...		...	
Lacaille 2512	...		...		...		+0·88	0·5	−0·11	0·7	...	
Lacaille 3274	...		−1·07	0·9	+0·26	1·7	−1·29	1·3	−0·05	0·5	−0·39	1·2
θ Chamæleontis	...		...		+0·14	2·4	−0·38	1·3	...		...	
η Chamæleontis	...		...		−0·96	2·2	+0·50	0·7	...		−0·21	0·7

TABLE XIV.—*continued.*

Star.	1905.				1908.				1910.			
	E.		W.		E.		W.		E.		W.	
	Δδ	Wt.	Δδ	Wt.	Δδ	Wt.	Δδ	Wt.	Δδ	Wt.	Δδ	Wt.
ζ Octantis	−0″·35	3·4	−0″·86	2·4	−0″·29	2·7	−0″·67	2·2	+0″·53	0·7	″...	
γ Chamæleontis	...		...		−0·23	1·9	+0·45	0·7	...		−1·12	0·7
Lacaille 4510	+0·19	3·9	+0·68	2·8	+0·04	1·3	−0·72	2·2	...		...	
η Octantis	+0·23	2·7	+0·32	2·9	+0·45	1·9	...		...		...	
β Chamæleontis	+1·11	0·7	...		−0·06	2·0	−0·48	0·8	...		...	
ι Octantis	+0·54	3·3	−0·40	3·8	+0·45	2·2	−0·60	2·4	...		...	
κ Octantis	+0·34	3·7	−0·55	2·1	...		...		+0·78	0·5	...	
θ Apodis	...		...		−0·53	0·8	−1·07	1·7	...		...	
α Apodis	...		...		...		−1·15	1·2	+0·19	0·8	+0·71	0·7
ζ Apodis	+0·85	2·0	−0·44	0·8	...		−0·20	1·5	...		...	
Lacaille 6077	...		...		+0·85	1·3	−1·06	1·3	...		...	
ρ Octantis	+0·56	1·2	...		−0·08	0·8	−0·77	2·9	+1·42	1·5	...	
δ^1 Apodis	...		...		+0·47	1·3	+0·07	2·0	...		...	
γ Apodis	...		...		+0·74	2·0	−1·38	0·8	...		...	
Lacaille 6545	−0·18	1·5	+0·54	1·5	+0·22	2·5	−0·42	1·6	−0·66	1·0	+0·39	1·2
β Apodis	...		...		+0·55	2·0	−0·70	1·7	...		...	
χ Octantis	...		...		+0·44	2·3	−0·26	1·5	...		...	
Lacaille 8094	...		−0·09	0·9	−0·54	2·7	−0·89	1·2	...		...	
Lacaille 8257	+0·17	2·0	...		+0·47	2·9	+0·61	2·5	+0·41	0·7	...	
μ^1 Octantis	...		...		+0·11	1·6	−0·65	1·6	...		...	
α Octantis	...		...		−0·02	2·2	−0·24	2·2	...		...	
ν Octantis	...		...		−0·78	1·3	−0·09	1·9	...		...	
υ (*C*) Octantis	−0·12	3·9	+0·14	3·0	...		−0·43	3·5	...		...	
τ Octantis	+0·13	3·2	+0·04	2·7	−0·27	2·2	−0·59	1·2	+1·68	0·7	...	
Lacaille 9494	+0·22	0·7	−0·09	1·3	−0·25	2·2	−0·74	1·2	...		...	
θ Octantis	−0·54	2·0	+0·16	2·0	+0·02	0·5	...		+0·12	0·5	−0·50	1·0

whence we derive in the mean

Δδ (above − below).

	Clamp E.	Weight.	Clamp W.	Weight.
1905	+0″·17	45	−0″·15	40
1908	+0·04	65	−0·49	62
1910	+0·47	10	−0·27	8

The differences E − W give in the mean the value

$$+0''\cdot47,$$

which corresponds very closely with the value of $2B_{\text{II}}$ at the pole, as previously determined.

Applying the corrections $-2(A \mp B_{\text{II}})$ respectively to results from Clamp E and Clamp W, we obtain the following values :—

$\Delta\delta$ (above − below).

	Clamp E.	Clamp W.
1905 . . .	+0″·07	+0″·23
1908 . . .	−0·06	−0·11
1910 . . .	+0·37	+0·11

and the corresponding corrections to the declinations on account of the combined effects of latitude and flexure :—

	Clamp E.	Clamp W.
1905 . . .	−0″·04	−0″·12
1908 . . .	+0·03	+0·06
1910 . . .	−0·18	−0·06

The parts of these quantities due to flexure alone are respectively

1905 . . .	−0″·27
1908 . . .	−0·14
1910 . . .	−0·05

whence the derived values for the latitude correction referred to the mean system are

	Clamp E.	Clamp W.
1905 . . .	+0″·23	+0″·15
1908 . . .	+0·17	+0·20
1910 . . .	−0·13	−0·01

Collecting the various determinations, we find as the latitude correction referred to the homogeneous system, $[\frac{1}{2}(\text{I}+\text{II}) : \frac{1}{2}(\text{E}+\text{W})]$.

Period of Observations.	Position.	Clamp.	$\Delta\phi$.	Weight.
1906–10	I.	E	+ 0″·12	217
,,	I.	W	+ 0·08	192
1905	II.	E	+ 0·23	45
,,	II.	W	+ 0·15	40
1908	II.	E	+ 0·17	65
,,	II.	W	+ 0·20	62
1910	II.	E	− 0·13	10
,,	II.	W	− 0·01	8
1911	I.	E and W	+ 0·17	309

The weighted mean of these results gives as the definitive latitude correction applicable to the mean system of the Ledgers

$$\Delta\phi = +0''\cdot 14 \pm 0''\cdot 012.$$

The mean latitude of the transit-circle, as derived with the Pulkowa refraction constant, is therefore

$$-33^\circ\ 56'\ 2''\!\cdot 36.$$

Instead of utilising the mean value of the latitude correction in order to reduce the whole series of observations to a homogeneous system, it has been thought preferable to apply to each homogeneous group of observations the values of the corrections derived solely from the observations contained within the group. Corrections have accordingly been applied in accordance with the following table, which include the combined effects of latitude correction, flexure correction, and the reductions A, B, necessary to refer the whole to a homogeneous mean system.

TABLE XV.—*Table of Systematic Corrections to the Declination.*

Dec.	1906–11.		1905.		1908.		1910.	
	I. E.	I. W.	II. E.	II. W.	II. E.	II. W.	II. E.	II. W.
°	″	″	″	″	″	″	″	″
+ 35	+ 0·39	+ 0·55	+ 0·31	+ 0·56	+ 0·17	+ 0·41	− 0·18	+ 0·06
30	+ 0·34	+ 0·54	+ 0·30	+ 0·59	+ 0·16	+ 0·45	− 0·19	+ 0·10
25	+ 0·31	+ 0·55	+ 0·27	+ 0·59	+ 0·14	+ 0·46	− 0·21	+ 0·12
20	+ 0·27	+ 0·53	+ 0·24	+ 0·60	+ 0·12	+ 0·47	− 0·22	+ 0·15
15	+ 0·23	+ 0·51	+ 0·22	+ 0·61	+ 0·11	+ 0·49	− 0·22	+ 0·16
10	+ 0·18	+ 0·48	+ 0·21	+ 0·61	+ 0·11	+ 0·51	− 0·22	+ 0·18
+ 5	+ 0·15	+ 0·45	+ 0·20	+ 0·60	+ 0·11	+ 0·51	− 0·21	+ 0·19
0	+ 0·10	+ 0·42	+ 0·20	+ 0·60	+ 0·11	+ 0·52	− 0·20	+ 0·20
− 5	+ 0·07	+ 0·38	+ 0·19	+ 0·59	+ 0·11	+ 0·51	− 0·19	+ 0·21
10	+ 0·05	+ 0·36	+ 0·17	+ 0·57	+ 0·10	+ 0·50	− 0·20	+ 0·21
15	0·00	+ 0·33	+ 0·14	+ 0·56	+ 0·09	+ 0·51	− 0·21	+ 0·22
20	− 0·02	+ 0·30	+ 0·10	+ 0·54	+ 0·06	+ 0·50	− 0·22	+ 0·23
25	− 0·07	+ 0·27	+ 0·08	+ 0·53	+ 0·04	+ 0·50	− 0·22	+ 0·23
30	− 0·10	+ 0·24	+ 0·05	+ 0·50	+ 0·04	+ 0·48	− 0·22	+ 0·22
35	− 0·13	+ 0·21	+ 0·03	+ 0·45	+ 0·04	+ 0·46	− 0·21	+ 0·21
40	− 0·15	+ 0·19	+ 0·02	+ 0·41	+ 0·05	+ 0·43	− 0·20	+ 0·19
45	− 0·19	+ 0·17	+ 0·01	+ 0·37	+ 0·04	+ 0·40	− 0·19	+ 0·17
50	− 0·23	+ 0·15	0·00	+ 0·32	+ 0·04	+ 0·36	− 0·18	+ 0·14
55	− 0·26	+ 0·13	− 0·01	+ 0·29	+ 0·04	+ 0·34	− 0·17	+ 0·12
60	− 0·29	+ 0·11	− 0·03	+ 0·25	+ 0·04	+ 0·31	− 0·17	+ 0·11
65	− 0·32	+ 0·09	− 0·05	+ 0·21	+ 0·03	+ 0·29	− 0·16	+ 0·09
70	− 0·34	+ 0·06	− 0·06	+ 0·18	+ 0·03	+ 0·27	− 0·16	+ 0·08
75	− 0·36	+ 0·02	− 0·07	+ 0·15	+ 0·03	+ 0·25	− 0·15	+ 0·07
80	− 0·38	− 0·02	− 0·08	+ 0·14	+ 0·03	+ 0·24	− 0·15	+ 0·07
85	− 0·39	− 0·04	− 0·10	+ 0·12	+ 0·02	+ 0·23	− 0·15	+ 0·07
90	− 0·41	− 0·07	− 0·12	+ 0·12	+ 0·01	+ 0·24	− 0·15	+ 0·08
85 S.P.	+ 0·43	+ 0·09	+ 0·13	− 0·13	0·00	− 0·26	+ 0·15	− 0·10
80 ,,	+ 0·45	+ 0·10	+ 0·16	− 0·12	+ 0·02	− 0·27	+ 0·16	− 0·11
75 ,,	+ 0·48	+ 0·12	+ 0·18	− 0·12	+ 0·03	− 0·29	+ 0·17	− 0·13

III.—FORMATION OF DEFINITIVE CATALOGUE PLACES.

The systematic periodic corrections to the right ascensions derived in § I. (p. xxvi) and the corrections to the declinations derived in § II. (p. xxxiv) were applied to the Ledger places, and separate means were first formed for the groups of observations in each of the four conditions I. E., I. W., II. E., II. W. These separate means were then combined into a single mean, with weights dependent on the number of observations in each group, in accordance with the following scheme of weights :—

No. of Observations.	Combining Weight.
1	$\frac{1}{3}$
2–3	$\frac{1}{2}$
4–7	1
8–10	$1\frac{1}{2}$
10+	2

In the case of those stars which are contained in Newcomb's Catalogue, the observations in the Ledgers have been referred to the mean epoch 1900·0 by the application of Newcomb's proper motions. In forming the final Catalogue positions, the proper motions thus introduced have been removed.

In the case of the double stars Sirius, Procyon, and α Centauri, the reductions to epoch include also the reductions from the bright (or observed) component to the centre of gravity of the system. The corrections thus introduced have been removed in like manner, so that the places quoted in the Catalogue represent the position of the actual object observed referred to the equinox 1900·0, but to the mean epoch of observation.

The right ascensions of the close circumpolars observed during 1911 have been adopted without further modification from the discussion of the observations contained in *Cape Annals*, vol. xi., part iii. The declinations of these same stars have been derived from the combination of the results therein with additional observations in other years. These additional observations have first received corrections, as indicated in the last section, and the combination has then been effected by regarding all the observations as of equal weight, *i.e.* the means from the various groups have been combined with weights simply proportional to the number of observations in each.

The entries in the separate columns of the Catalogue have the following significance :—

Column 1.—"No." The rotation number. * and † attached to a number indicate a footnote, † being used in the case of double stars.

Column 2.—"Mag." The magnitude taken from Boss's Catalogue or the Harvard Publications, or a few, marked with an asterisk, from recent Cape Observations.

Column 3.—"Name." For Bradley stars the name in Auwers' Bradley has been adopted, except in a few cases mentioned in footnotes; for stars south of declination −23°, the C.G.A. has been followed, with the exceptions used by Auwers in vol. xlvii. of

the *Monthly Notices.* The names of the stars *z* Octantis, A Octantis, have been retained in accordance with the usage in previous Cape Catalogues. For stars otherwise unnamed, a Catalogue number is given in the following order of preference :—Bradley; Mayer; Lacaille; Piazzi; Lalande; Brisbane; Catalogo General Argentina (C.G.A); Cape 1880; Gilliss's Circumpolar Zones; Bonn Durchmusterung. *m, pr, seq, br* in this column signify mass, preceding component, following component, or bright component.

Columns 4 and 9.—"Mean R.A. 1900·0" and "Mean Dec. 1900·0" respectively. The mean right ascension and declination derived from the observations made for the purposes of this Catalogue, and combined according to the methods described above. They are referred to the *mean epoch of observation*, but to the *equinox of* 1900·0. The third decimal figure is omitted from the Mean R.A. of Polar stars observed in 1911 only. The R.A. is supplied to the nearest second for stars not observed in this element.

Columns 5 and 10.—"$\mu\Delta$E." The quantities tabulated in these columns are the corrections on account of proper motion to be applied to the entries in the columns immediately preceding in order to refer the latter to the epoch as well as the equinox of 1900·0. They depend on the values of the proper motions in columns 8 and 13.

Columns 6 and 11.—"Annual Variation 1900·0." The annual changes in right ascension and declination due to the combined effects of precession and proper motion. Where no entry is contained in the columns immediately preceding, the quantities in these columns represent the annual precession computed from the formulæ

$$\left.\begin{aligned} p_\alpha &= m + n \tan\delta \sin\alpha, \\ p_\delta &= n \cos\alpha \end{aligned}\right\} \qquad \text{(A)}$$

where, in accordance with Newcomb's values for the precessional motion,

$$\begin{aligned} m &= 3^{s}{\cdot}07234 \\ n &= 1^{s}{\cdot}33646 \\ &= 20''{\cdot}0468. \end{aligned}$$

Columns 7 and 12.—"Sec. Var. 1900·0." The quantities given in these columns are in general the centennial variations of the annual variations due to the combined effect of the motions of the pole and equinox and the "proper motion" of the star. If we denote by α, δ the true co-ordinates of a star referred to the *mean* equator and equinox of epoch t, and suppose that t is expressed in terms of the tropical year as unit, the quantities involved are the values for 1900 of the expressions

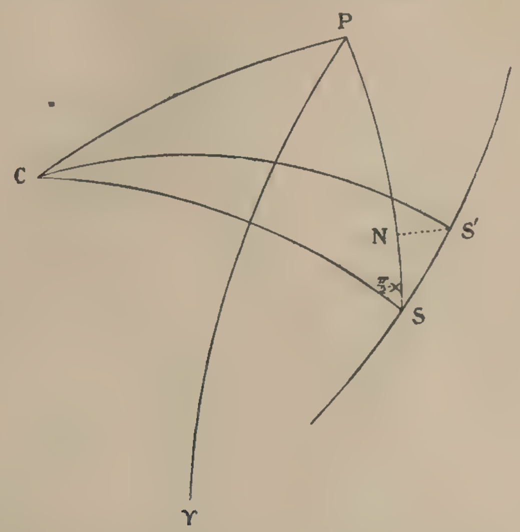
$$100\frac{d^2\alpha}{dt^2}, \quad 100\frac{d^2\delta}{dt^2}.$$

Let us suppose that the "proper motion" of the star consists of a motion with uniform velocity along a great circle. In the annexed diagram, let S denote the star's position at time t, S' its position at time $t+\Delta t$, and C the pole of the great circle SS'. Further let P, Υ represent the mean pole and equinox of the epoch t.

Let ρ denote the amount of the annual proper motion and χ its position angle with reference to the pole of epoch t. Then in the diagram below

$$SS' = \rho\Delta t$$
$$< PSC = \frac{\pi}{2} - \chi$$
$$PS = \frac{\pi}{2} - \delta$$
$$< \Upsilon PS = \alpha.$$

The variations in α, δ due to the precessional motions of P, Υ are given by the formulæ, (A) above, where however m and n should not be regarded as strictly constant but as



functions slightly variable with the time t. In accordance with Newcomb's determinations these values at epoch $1900 + t$ are

$$m = 3^s{\cdot}07234 + 0^s{\cdot}0000186t$$
$$n = 1^s{\cdot}33646 - 0^s{\cdot}0000057t$$
$$= 20''{\cdot}0468 - 0''{\cdot}0000855t.$$

If μ_α, μ_δ denote the "proper motions" of the star, in R.A. and declination respectively, referred to the equator and equinox of epoch t; μ_α, μ_δ are the parts of the complete expressions for $\frac{d\alpha}{dt}, \frac{d\delta}{dt}$ which cannot be attributed to precession, *i.e.*

$$\mu_\alpha = \frac{d\alpha}{dt} - p_\alpha \quad , \quad \mu_\delta = \frac{d\delta}{dt} - p_\delta \quad . \quad . \quad . \quad . \quad . \quad . \quad \text{(B)}.$$

The changes thus represented by μ_α, μ_δ in the interval Δt result solely in the transference of the star from the point S to the point S', irrespective of any motion which may be attributed to the points P, Υ. Hence if we draw the perpendicular $S'N$ on PS, we have

$$S'N = \mu_\alpha \Delta t \cos\delta$$
$$SN = \mu_\delta \Delta t.$$

But we have also, from the triangle $SS'N$,

$$S'N = SS' \sin\chi \quad , \quad SN = SS' \cos\chi\,;$$

whence

$$\left.\begin{aligned} \mu_\alpha \cos\delta &= \rho \sin\chi \\ \mu_\delta &= \rho\cos\chi \end{aligned}\right\} \quad . \quad . \quad . \quad . \quad . \quad . \quad . \quad (C).$$

Denote by A, D the right ascension and declination of the point C. The motion of the star being along a great circle, this point will be stationary, and therefore any changes in A, D must be solely those resulting from the precessional motions of the pole and equinox of reference. Hence

$$\left.\begin{aligned} \frac{dA}{dt} &= m + n\tan D \sin A \\ \frac{dD}{dt} &= n\cos A \end{aligned}\right\} \quad . \quad . \quad . \quad . \quad . \quad . \quad (D).$$

We have likewise, from (B),

$$\left.\begin{aligned} \frac{d\alpha}{dt} &= m + n\tan\delta\sin\alpha + \mu_\alpha \\ \frac{d\delta}{dt} &= n\cos\alpha + \mu_\delta \end{aligned}\right\} \quad . \quad . \quad . \quad . \quad . \quad . \quad (E).$$

But in the spherical triangle PCS, we have

$$PS = \frac{\pi}{2} - \delta \quad , \quad PD = \frac{\pi}{2} - D \quad , \quad SC = \frac{\pi}{2} \quad , \quad <SPC = \alpha - A \quad , \quad <PSC = \frac{\pi}{2} - \chi,$$

whence

$$\left.\begin{aligned} \cos\delta\sin\chi &= +\sin D \\ \sin\delta\sin\chi &= -\cos D\cos(\alpha - A) \\ \cos\chi &= +\cos D \sin(\alpha - A) \end{aligned}\right\} \quad . \quad . \quad . \quad . \quad . \quad . \quad (F).$$

and therefore, by means of (C),

$$\left.\begin{aligned} \mu_\alpha \cos^2\delta &= \rho\sin D, \\ \mu_\delta &= \rho\cos D\sin(\alpha - A) \end{aligned}\right\} \quad . \quad . \quad . \quad . \quad . \quad . \quad (G).$$

The conditions that the proper motion is uniform along a great circle are expressed by equations (D), together with the additional equation

$$\frac{d\rho}{dt} = 0.$$

Hence, if we differentiate equations (G) and substitute for $\frac{dA}{dt}, \frac{dD}{dt}$ from (D), we find

$$\begin{aligned} \frac{d}{dt}(\mu_\alpha\cos^2\delta) &= \rho\cos D\,(n\cos A) \\ \frac{d\mu_\delta}{dt} &= -\rho\sin D\sin(\alpha - A)\,(n\cos A) + \rho\cos D\cos(\alpha - A)\left(\frac{d\alpha}{dt} - m - n\tan D\sin A\right), \end{aligned}$$

which, by means of (F), reduce to

$$\begin{aligned} \frac{d}{dt}(\mu_\alpha\cos^2\delta) &= n\rho\,(\cos\chi\sin\alpha - \sin\delta\sin\chi\cos\alpha) \\ \frac{d\mu_\delta}{dt} &= -n\rho\cos\delta\sin\chi\sin\alpha - \rho\sin\delta\sin\chi\,(n\tan\delta\sin\alpha + \mu_\alpha) \\ &= -n\rho\sec\delta\sin\chi\sin\alpha - \mu_\alpha\rho\sin\delta\sin\chi. \end{aligned}$$

Replacing $\rho \sin \chi$, $\rho \cos \chi$ by means of (C), we derive

$$\frac{d}{dt}(\mu_\alpha \cos^2\delta) = n(\mu_\delta \sin \alpha - \mu_\alpha \sin \delta \cos \delta \cos \alpha),$$

$$\frac{d\mu_\delta}{dt} = -n\mu_\alpha \sin \alpha - \mu_\alpha^2 \sin \delta \cos \delta.$$

In virtue of the second of equations (E), the first of these gives

$$\frac{d\mu_\alpha}{dt} = n\mu_\delta \sin \alpha \sec^2\delta + n\mu_\alpha \tan \delta \cos \alpha + 2\mu_\alpha\mu_\delta \tan \delta.$$

Finally, on differentiating equations (E) and substituting for

$$\frac{d\alpha}{dt}, \quad \frac{d\delta}{dt}, \quad \frac{d\mu_\alpha}{dt}, \quad \frac{d\mu_\delta}{dt}$$

from (E) and from the equations just derived, we find

$$\begin{aligned}
\frac{d^2\alpha}{dt^2} &= \frac{dm}{dt} + \frac{dn}{dt} \tan \delta \sin \alpha + n \sec^2\delta \sin \alpha (n \cos \alpha + \mu_\delta) \\
&\quad + n \tan \delta \cos \alpha (m + n \tan \delta \sin \alpha + \mu_\alpha) \\
&\quad + n\mu_\delta \sin \alpha \sec^2\delta + n\mu_\alpha \tan \delta \cos \alpha + 2\mu_\alpha\mu_\delta \tan \delta, \\
&= \frac{dm}{dt} + n^2 \sin \alpha \cos \alpha + \tan \delta \left(\frac{dn}{dt} \sin \alpha + mn \cos \alpha\right) + \tan^2\delta (n^2 \sin 2\alpha) \\
&\quad + 2n\mu_\alpha \tan \delta \cos \alpha + 2n\mu_\delta \sec^2\delta \sin \alpha + 2\mu_\alpha\mu_\delta \tan \delta. \\
\frac{d^2\delta}{dt^2} &= \frac{dn}{dt} \cos \alpha - n \sin \alpha (m + n \tan \delta \sin \alpha + \mu_\alpha) \\
&\quad - n\mu_\alpha \sin \alpha - \mu_\alpha^2 \sin \delta \cos \delta \\
&= \frac{dn}{dt} \cos \alpha - mn \sin \alpha - n^2 \sin^2\alpha \tan \delta - 2n\mu_\alpha \sin \alpha - \tfrac{1}{2}\mu_\alpha^2 \sin 2\delta.
\end{aligned}$$

Replacing m, n, $\frac{dm}{dt}$, $\frac{dn}{dt}$ by their values for the epoch 1900, and expressing the results in seconds of time and seconds of arc respectively, we finally obtain the following numerical expressions for the centennial variations of the annual variations which figure in the Catalogue:

$$\begin{aligned}
100\frac{d^2\alpha}{dt^2} &= 0^s{\cdot}00186 + [7{\cdot}81255] \sin 2\alpha \\
&\quad + \{[8{\cdot}47508] \cos \alpha - [6{\cdot}756] \sin \alpha\} \tan \delta \\
&\quad + [8{\cdot}11358] \sin 2\alpha \tan^2\delta \\
&\quad + [8{\cdot}28865]\mu_\alpha \tan \delta \cos \alpha + [7{\cdot}11256]\mu_\delta \sec^2\delta \sin \alpha \\
&\quad + [6{\cdot}9866]\mu_\alpha\mu_\delta \tan \delta, \\
100\frac{d^2\delta}{dt^2} &= -[7{\cdot}929] \cos \alpha - [9{\cdot}65117] \sin \alpha - [9{\cdot}28967] \sin^2\alpha \tan \delta \\
&\quad - [9{\cdot}36474]\mu_\alpha \sin \alpha + [8{\cdot}7367]\mu^2_\alpha \sin 2\delta.
\end{aligned}$$

Columns 8 and 13.—"Proper Motion." These quantities are the proper motions as above described. The numerical values adopted have been taken from Boss's Catalogue for all stars contained therein; from Newcomb when the Newcomb No. is given in the last column; and from the Cape Catalogue of Astrographic Standard Stars when marked *.

Column 14.—"No. of Obs." This indicates the number of observations. When two numbers are quoted, the former applies to the right ascensions, and the latter to the

declinations. When a single number only is given, it is to be regarded as applicable to both elements, or in a few cases to the single element observed.

Column 15.—"Epoch 1900+." The mean epoch of observation, expressed in years in excess of 1900. When the epochs of observation in the two elements are not identical, two epochs are quoted, the former of which refers to the right ascensions and the latter to the declinations.

Column 16.—"Boss No." The number of the star in Boss's Preliminary General Catalogue. For a few stars contained in Newcomb's Catalogue but not in Boss's, the Newcomb number is inserted, preceded by N.

IV.—FURTHER CORRECTIONS TO THE CATALOGUE RIGHT ASCENSIONS.

The system of right ascensions depends on that of the equatorial clock stars as revised through the medium of the daylight observations. The extension of this system to the higher declinations depends on the assumption that the form of the pivots has remained sensibly invariable throughout the period of observations for the Catalogue. The pivot corrections employed were based on observations made in the years 1902 and 1904, before the commencement of the Catalogue observations.

A new determination has recently been made (1914 July). It will be sufficient here to exhibit the differences between the two determinations as affecting the mean results obtained in the four conditions I. E., I. W., II. E., II. W., as the star observations have been very approximately symmetrically distributed in relation to these conditions.

Denoting by ΔT the amount by which a transit is accelerated in consequence of pivot error, Table XVI., p. xli, gives the values of $\Delta T\cos\delta$, in the mean of the four conditions, for each 5° of zenith distance in accordance with both the old and new determinations.

This table shows that the effect of wear of the pivots, so far at least as it can affect the mean system of the Catalogue, is insignificant and justifies the use of the earlier determinations throughout.

The equinox of the Catalogue has not been derived from fundamental considerations, but has been based on Newcomb's determination. It remains to examine to what extent the concurrent observations of the Sun indicate a modification of this equinox, *i.e.* by what amount in common all the Right Ascensions should be increased or decreased. The details of the Sun observations will be given in full in a separate publication. To the observed right ascensions and declinations of the Sun, "day corrections" have been applied, derived from observations of bright stars at about the

same time. These "day corrections" were computed from the final star places contained in the Catalogue. Thus the derived right ascensions and declinations of the Sun are in systematic accordance with those of the Catalogue. These

TABLE XVI.—*Corrections on account of the Form of the Pivots.*

$\Delta T \cos\delta$

Zenith Distance (South).	Old Determination.	New Determination.	Old—New.	Zenith Distance (South).	Old Determination.	New Determination.	Old—New.
°	s	s	s	°	s	s	s
− 90	+ 0·025	+ 0·029	− 0·004	0	+ ·001	·000	+ ·001
− 85	+ ·025	+ ·029	− ·004	+ 5	+ ·002	+ ·002	·000
− 80	+ ·024	+ ·026	− ·002	+ 10	+ ·005	+ ·004	+ ·001
− 75	+ ·022	+ ·021	+ ·001	+ 15	+ ·007	+ ·005	+ ·002
− 70	+ ·020	+ ·020	·000	+ 20	+ ·009	+ ·007	+ ·002
− 65	+ ·019	+ ·018	+ ·001	+ 25	+ ·009	+ ·009	·000
− 60	+ ·015	+ ·015	·000	+ 30	+ ·008	+ ·009	− ·001
− 55	+ ·010	+ ·010	·000	+ 35	+ ·004	+ ·007	− ·003
− 50	+ ·005	+ ·004	+ ·001	+ 40	+ ·001	+ ·003	− ·002
− 45	+ ·002	·000	+ ·002	+ 45	− ·002	·000	− ·002
− 40	− ·003	− ·003	·000	+ 50	− ·008	− ·004	− ·004
− 35	− ·007	− ·007	·000	+ 55	− ·012	− ·010	− ·002
− 30	− ·010	− ·009	− ·001	+ 60	− ·016	− ·015	− ·001
− 25	− ·010	− ·009	− ·001	+ 65	− ·018	− ·018	·000
− 20	− ·009	− ·007	− ·002	+ 70	− ·020	− ·020	·000
− 15	− ·007	− ·005	− ·002	+ 75	− ·021	− ·021	·000
− 10	− ·005	− ·004	− ·001	+ 80	− ·024	− ·026	+ ·002
− 5	− ·001	− ·002	+ ·001	+ 85	− ·026	− ·029	+ ·003
				+ 90	− ·025	− ·029	+ ·004

observations have been analysed by a method exactly similar to that given in *Cape Annals*, vol. ii., part 5. The resulting correction to the equinox derived in the different years over which the Sun observations extend in the sense in which it is to be applied as a uniform correction to the right ascensions of the catalogue are as follows:—

	s
1907 . . .	−0·069
1908 . . .	−0·104
1909 . . .	−0·104
1910 . . .	−0·085
1911 . . .	−0·026

The discordance between the results obtained in different years, and more especially the pronounced fall in value for the year 1911, where a different method of observing was used, indicate that but little weight can be attached to the results. Separating out

the residuals as obtained from the observations by different observers, we obtain the following more extended table :—

Separate Determination of Equinox Correction by Different Observers.

Observer.	1907.	1908.	1909.	1910.	1911.
	s	s	s	s	s
C	−0·067	−0·074	−0·076	−0·094	−0·064
AP	−0·105	−0·141	−0·146	−0·154	−0·018
RC	−0·090	−0·090	−0·093	−0·109	−0·067
AW	−0·077	−0·074	−0·105	−0·090	−0·034
M	−0·080	−0·080	−0·060	−0·089	−0·001
JW	−0·038	−0·058	−0·091	−0·082	...
JJ	−0·100	−0·120	−0·106	−0·104	−0·051
S	...	...	...	...	−0·060

If we disregard the final column, the quantities in the same horizontal line for the most part give a satisfactory agreement, showing that the discordances between quantities in the same vertical column depend to a greater extent on systematic personality in observing than on accidental errors of observation. Combining the observations of 1907–10, where the same method of observing was used throughout, we obtain the following determinations, each based on homogeneous series of observations :—

Observer.	1907–10.	1911.
	s	s
C	−0·078	−0·064
AP	− ·136	− ·018
RC	− ·097	− ·067
AW	− ·085	− ·034
M	− ·079	− ·001
JW	− ·066	...
JJ	− ·108	− ·051
S	...	− ·060

Assuming that the accidental errors of these determinations are insignificant in comparison with the systematic errors, and that each determination is equally liable to such systematic error, we may advantageously combine these with equal weight and derive

$$\Delta\alpha = -0^{s}{\cdot}068 \pm 0^{s}{\cdot}0063.$$

The probable error here derived from the residuals represents the combined effect of accidental and systematic error.

This correction has not been applied, as it appeared preferable to await the result of a more definitive correction to Newcomb's equinox, which it would seem can scarcely be reliably determined without the combination of observations from several observatories and extending over longer intervals.

V.—FURTHER CORRECTIONS TO THE CATALOGUE DECLINATIONS.

The declination system of the Catalogue has been based purely on fundamental considerations, except in one respect, viz. that the Pulkowa refraction tables have been adopted. The latitude of the Observatory is not sufficiently high to permit of a fundamental determination of the refraction constant being made by means of declinations observed at both culminations. Recourse must therefore be had to comparison of the declination system with results derived from northern observatories. The most recent and comprehensive data available for the purpose are those of Boss's Preliminary General Catalogue.

Arranging the results in order of declination, we obtain the following comparison :—

Comparison between the Declinations of the Catalogue and Boss's Preliminary General Catalogue.

Limits of Declination.	Δδ (Cape Fundamental—Boss).	No. of Stars.	Limits of Declination.	Δδ (Cape Fundamental—Boss).	No. of Stars.
above +30°	+0″.49	46	−40° to −50°	+0″.29	176
+30° to +20°	+0.36	110	−50° „ −60°	+0.27	104
+20° „ +10°	+0.28	112	−60° „ −70°	−0.02	72
+10° „ 0°	+0.10	121	−70° „ −80°	−0.12	55
0° „ −10°	+0.02	101	−80° „ −90°	+0.03	35
−10° „ −20°	.00	93	below pole	−Δδ	...
−20° „ −30°	+0.10	115	−90° to −80°	.00	33
−30° „ −40°	+0.18	93	−80° „ −70°	−0.10	24

Equating these differences to the expression

$$-\Delta\phi - \Delta k \tan\zeta$$

where $\Delta\phi$ denotes a correction to the latitude consequently on an alteration Δk in the refraction constant, and weighting the resulting equations proportionally to the numbers in the final column, we derive the normal equations

$$129.0\,\Delta\phi + 31.6\,\Delta k = -20''.33$$
$$31.6\,\Delta\phi + 133.6\,\Delta k = -16''.97$$

with the solution

$$\Delta\phi = -0'.134$$
$$\Delta k = -0''.095.$$

The refractions used in the formation of the Catalogue are taken from the Pulkowa *Tabulæ Refractionum.* For atmospheric conditions which correspond closely with the mean conditions under which the observations were made the

refractions computed from these tables are given in the second column of the following table :—

Comparison of Mean Refractions from Pulkowa and Paris Tables.

Barometer 30 inches. Thermometer 60° F.

ζ	Pulkowa.	Paris.	Diff.	Δk tan ζ.
°	"	"	"	"
0	0·00	0·00	0·00	0·00
10	10·04	10·02	+ ·02	·02
20	20·73	20·69	·04	·03
30	32·87	32·81	·06	·05
40	47·76	47·68	·08	·08
45	56·89	56·79	·10	·10
50	67·77	67·64	·13	·11
55	81·14	80·99	·15	·13
60	98·30	98·13	·17	·16
65	121·49	121·28	·21	·20
70	155·11	154·85	·26	·26
75	209·2	208·8	·4	·35
80	311·8	311·2	·6	·54

The third column gives the refractions for the same atmospheric conditions derived from the tables of the *Connaissance des Temps*, 1916. It will be seen that these are slightly smaller than those from the Pulkowa tables, but that the differences shown in the fourth column correspond almost exactly with the value Δk tan ζ in the fifth column as derived from a comparison of the present Catalogue with Boss. Thus it appears that the refractions used have been too large and that a very close agreement between the results of the Cape observations and those of northern observatories would have been secured had the Paris tables been used instead of the Pulkowa tables. A similar but slightly larger reduction from the Pulkowa values is indicated by a recent discussion of Pulkowa observations (v. Backlund, *Die Deklinationssysteme der Pulkowoer Kataloge 1885, 1892, 1900*, Mitteilungen der Nicolai-Hauptsternwarte zu Pulkowo, Band VI. 1).

It remains to examine the effect of the modified constant on the derived value of the latitude of the transit-circle. From a comparison between observations of upper culminations and lower culminations of circumpolar stars, using the Pulkowa refractions, the value obtained above, (§ II.) p. xxxiv, was

$$-33^\circ\ \ 56'\ \ 2''{\cdot}36.$$

The discussions of this section indicate a correction to this quantity amounting to

$$-0''{\cdot}134,$$

yielding as the definitive value of the latitude of the transit-circle from the observations for the present Catalogue

$$-33^\circ\ 56'\ 2''\cdot49.$$

We may compare with this the values derived from previous series of observations. These have all been obtained with different instruments, but the difference of geodetic latitude has been accurately derived from measurements at the surface, showing that the position of the new transit-circle is in latitude $1''\cdot05$ to the North of the old.

The latitude of the old transit-circle derived from observations between 1879 and 1885 is discussed in the Introduction to the Cape Catalogue, 1885 (p. xlvii.), and the definitive value arising from this discussion is

$$-33^\circ\ 56'\ 3''\cdot54.$$

Again, from zenith telescope observations by the Talcott method between the years 1886 and 1891, the latitude of instrument, mounted in the same geodetic latitude as the old transit-circle, was found to be

$$-33^\circ\ 56'\ 3''\cdot65.$$

(Introduction to Cape Catalogue, 1885, p. xlvii.)

The result derived for the old transit-circle for the period 1885–95 (Introduction to Cape Catalogue, 1890, p. xxiv.) is

$$-33^\circ\ 56'\ 3''\cdot45.$$

The mean of these three determinations, regarded as of equal weight, amounts to

$$-33^\circ\ 56'\ 3''\cdot55,$$

or, on applying the correction for the difference of latitude of the two instruments, we obtain for the latitude of the new transit-circle

$$-33^\circ\ 56'\ 2''\cdot50,$$

in almost exact accord with the value derived from the discussion of the observations for the present Catalogue.

NOTE.

The Right Ascensions of the Catalogue depend on Newcomb's equinox, but have in other respects been fundamentally derived.

To refer the observations to an absolute system based on concurrent Cape observations of the Sun, a correction of

$$-0^{s}\cdot068 \qquad \text{(v. p. xlii)}$$

should be applied throughout.

The Declinations are based on the Pulkowa refractions (*Tabulæ Refractionum*), and the value

$$-33^{\circ}\ 56'\ 2''\cdot36 \qquad \text{(v. p. xxxiv)}$$

for the mean latitude of the transit-circle, derived from the observations themselves.

A re-determination of the refraction constant and latitude from comparison of the results with Boss's Preliminary General Catalogue indicates the following correction to the declinations

Dec.	Δδ.	Dec.	Δδ.
°	"	°	"
+40	−0·47	−30	−0·14
+30	− ·33	−40	− ·13
+20	− ·27	−50	− ·11
+10	− ·23	−60	− ·09
0	− ·20	−70	− ·07
−10	− ·18	−80	− ·04
−20	− ·16	−90	·00

corresponding with the resulting value

$$-33^{\circ}\ 56'\ 2''\cdot49$$

for the latitude of the transit-circle.

CATALOGUE OF 1293 STARS

REDUCED WITHOUT PROPER MOTION

TO THE

EQUINOX 1900·0.

No.	Mag.	Name.	Mean R.A. 1900·0.	$\mu_a\Delta$E.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	Mean Dec. 1900·0.	$\mu_\delta\Delta$E.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	No. of Obs.	Epoch 1900+.	Boss No.
			h m s	s	s	s	s	° ′ ″	″	″	″	″			
1	4·8	33 Piscium	0 0 12·978	+ ·013	+ 3·0709	− ·0014	− ·0013	− 6 15 59·94	− ·87	+20·137	− ·009	+ ·090	19	9·64	1
2	6·6	5 Ceti	3 4·856	− ·003	3·0717	+ ·0005	+ ·0003	− 3 0 15·60	+ ·05	20·040	·015	− ·005	16 : 17	9·32	9
3	2·0	21 Andromedæ α	3 13·099	− ·087	3·0931	+ ·0185	+ ·0106	+28 32 16·89	+ 1·32	19·884	·015	− ·161	22	8·18	10
4	7·4	Lacaille 9745	3 16·92	...	2·751	− ·397	...	−86 35 44·54	...	20·045	·014	...	45 : 68	11·55 : 10·11	...
5	3·9	Phœnicis ε	4 20·374	− ·092	3·0571	− ·0288	+ ·0112	−46 17 58·07	+ 1·52	19·857	·017	− ·186	22 : 23	8·22 : 8·15	16
6	5·7	Sculptoris κ^2	0 6 29·826	− ·010	+ 3·0532	− ·0137	+ ·0013	−28 21 23·93	− ·13	+20·056	− ·021	+ ·017	23	7·93	23
7	5·3	Sculptoris θ	6 39·175	− ·104	3·0574	− ·0190	+ ·0129	−35 41 33·28	− ·96	20·158	·022	+ ·120	22	8·03	24
8	2·9	88 Pegasi γ	8 5·132	·000	3·0846	+ ·0102	·0000	+14 37 39·38	+ ·11	20·021	·024	− ·013	22 : 21	8·52 : 8·27	27
9	5·9	Lacaille 23	9 32·16	+ ·08	2·351	− ·200	− ·007	−85 33 2·25	− ·68	20·089	·023	+ ·059	31 : 30	11·54	32
10	6·1	35 Piscium	9 49·786	− ·061	+ 3·0873	+ ·0068	+ ·0066	+ 8 15 56·22	+ ·22	20·004	·028	− ·024	17	9·31	35
11	7·5	Octantis o	0 12 30·65	− ·21	− 0·768	+ 2·376	+ ·019	−88 55 8·34	− ·04	+20·022	− ·002	+ ·005	46 : 130	11·59 : 8·91	47
12	3·7	8 Ceti ι	14 19·986	+ ·011	+ 3·0573	− ·0022	− ·0012	− 9 22 42·05	+ ·29	19·976	·036	− ·032	22	9·16 : 8·95	53
13	4·4	Toucani ζ	14 54·339	−2·546	3·1549	− ·0661	+ ·2723	−65 27 33·75	−10·90	21·171	·038	+1·166	17	9·35	55
14	5·7	41 Piscium d	15 27·085	+ ·004	3·0840	+ ·0068	− ·0004	+ 7 38 5·59	− ·13	20·015	·039	+ ·014	16	9·51	56
15	7·1	Lacaille 75	19 48·290	− ·438	2·9841	− ·0324	+ ·0572	−51 35 29·58	+ 1·99	19·712	·046	− ·260	24	7·65	72
16	6·0	44 Piscium	0 20 16·563	+ ·012	+ 3·0739	+ ·0037	− ·0013	+ 1 23 9·34	+ ·15	+19·952	− ·048	− ·016	19 : 18	9·58 : 9·55	73
17	2·8	Hydri β	20 38·34	−8·17	3·2208	− ·1480	+ ·7015	−77 48 59·46	− 3·18	20·290	·048	+ ·323	20 : 58	11·64 : 9·86	74
18	2·3	Phœnicis α	21 20·760	− ·147	2·9746	− ·0228	+ ·0175	−42 50 59·56	+ 3·38	19·559	·049	− ·401	22	8·42	78
19	6·7	10 Ceti	21 29·712	− ·046	3·0758	+ ·0028	+ ·0048	− 0 36 12·31	− ·02	19·961	·051	+ ·002	17	9·48	79
20	6·3	12 Ceti	24 56·146	− ·004	3·0614	+ ·0009	+ ·0005	− 4 30 35·53	+ ·05	19·921	·057	− ·007	32 : 30	8·23 : 7·61	90
21	5·4	Piazzi 0·91	0 25 22·691	+ ·022	+ 3·0029	− ·0095	− ·0026	−24 20 26·94	− ·13	+19·940	− ·057	+ ·016	22 : 23	8·33 : 8·23	91
22	6·6	Lacaille 109	25 34·760	+ ·006	2·9400	− ·0206	− ·0006	−41 29 33·94	− ·13	19·936	·056	+ ·014	18 : 19	9·29	92
23	5·0	Phœnicis λ^1	26 35·785	− ·115	2·9051	− ·0274	+ ·0130	−49 21 23·12	− ·12	19·926	·058	+ ·014	20 : 21	8·82 : 8·76	99
24	4·6	Toucani β^1	26 57·894	− ·123	2·7707	− ·0443	+ ·0131	−63 30 32·99	+ ·51	19·854	·056	− ·054	16	9·41	100
25	5·7	Lacaille 125	28 44·278	+ ·018	2·9731	− ·0126	− ·0023	−30 6 33·50	+ ·22	19·861	·063	− ·028	24 : 25	7·78 : 7·73	109
26	7·2	Lacaille 133	0 29 28·538	− ·067	+ 2·9206	− ·0213	+ ·0080	−42 58 59·50	− ·19	+19·904	− ·063	+ ·023	21 : 22	8·35 : 8·29	113
27	5·7	Lacaille 137	29 42·638	− ·224	2·8675	− ·0303	+ ·0238	−52 55 31·77	− ·23	19·904	·063	+ ·025	17 : 18	9·42 : 9·25	114
28†	5·4	13 Ceti m	30 6·326	− ·258	3·0869	+ ·0014	+ ·0272	− 4 8 36·42	+ ·17	19·856	·068	− ·018	20	9·48	116
29	4·4	29 Andromedæ π	31 32·275	− ·014	3·1939	+ ·0244	+ ·0017	+33 10 7·89	+ ·07	19·848	·072	− ·009	21	8·03	123
30†	5·9	Lacaille 147 m	32 13·393	− ·854	3·0860	− ·0104	+ ·1022	−25 19 2·88	+ ·07	19·840	·073	− ·009	25 : 28	8·36 : 8·07	127
31	4·5	30 Andromedæ ε	0 33 15·982	+ ·154	+ 3·1612	+ ·0208	− ·0173	+28 46 5·60	+ 2·21	+19·588	− ·075	− ·248	18	8·93	130
32	3·4	31 Andromedæ δ	33 58·755	− ·082	3·1985	+ ·0224	+ ·0107	+30 18 49·12	+ ·66	19·741	·077	− ·086	21 : 22	7·67 : 7·62	132
33	8·0	Lacaille 228	36 31·00	...	0·184	+ ·358	...	−85 48 4·67	...	19·793	·013	...	35 : 53	11·55 : 10·17	...
34	4·7	Phœnicis μ	36 36·087	+ ·020	2·8446	− ·0226	− ·0027	−46 38 1·81	+ ·19	19·766	·074	− ·026	27 : 28	7·45 : 7·36	142
35	2·0	16 Ceti β	38 34·367	− ·128	3·0133	− ·0054	+ ·0160	−18 32 7·38	− ·32	19·803	·082	+ ·039	23 : 22	8·02 : 8·10	147
36	4·6	Phœnicis η	0 38 51·719	+ ·008	+ 2·7104	− ·0318	− ·0009	−58 0 40·69	− ·06	+19·766	− ·075	+ ·007	20 : 21	8·65 : 8·50	148
37	6·1	Sculptoris λ^2	39 22·278	− ·174	+ 2·9070	− ·0171	+ ·0195	−38 58 20·29	− 1·03	19·868	− ·081	+ ·116	18	8·91	153
38	6·8	Lacaille 248	39 44·98	...	− 0·446	+ ·584	...	−86 14 57·36	...	19·746	+ ·003	...	49 : 77	11·60 : 10·21	...
39	5·4	Lacaille 193	39 47·495	+ ·031	+ 2·9730	− ·0073	− ·0034	−22 33 20·41	− ·79	19·832	− ·083	+ ·087	18	9·07	155
40	6·0	Lacaille 207	41 4·343	− ·145	2·8246	− ·0232	+ ·0178	−48 6 3·35	− ·66	19·807	·082	+ ·081	20 : 21	8·15 : 8·09	158
41	4·2	34 Andromedæ ζ	0 42 2·115	+ ·066	+ 3·1721	+ ·0180	− ·0074	+23 43 22·88	+ ·72	+19·631	− ·093	− ·080	19	8·96	164
42	6·0	Mayer 24	43 8·729	− ·480	3·1432	+ ·0065	+ ·0500	+ 4 45 48·52	+10·97	18·549	·096	−1·144	16	9·59	171
43	4·6	63 Piscium δ	43 29·666	− ·053	3·1090	+ ·0080	+ ·0055	+ 7 2 26·54	+ ·42	19·643	·094	− ·044	18 : 17	9·67 : 9·64	173
44	5·1	Hydri λ	45 7·493	− ·315	2·0993	− ·0367	+ ·0355	−75 28 4·36	+ ·14	19·644	·069	− ·016	19	8·88	182
45	5·0	20 Ceti	47 53·827	+ ·004	3·0638	+ ·0037	− ·0004	− 1 41 14·25	+ ·15	19·595	·101	− ·016	21 : 22	9·55 : 9·52	191
46	5·5	Toucani λ^2	0 51 16·237	+ ·017	+ 2·2524	− ·0325	− ·0023	−70 4 4·64	+ ·28	+19·510	− ·081	− ·037	26	7·45	204
47	5·7	68 Piscium h	52 25·292	− ·008	3·2374	+ ·0221	+ ·0009	+28 27 6·34	+ ·11	19·513	·115	− ·012	17	9·38	209
48	4·4	Sculptoris α	53 47·317	− ·004	2·8942	− ·0099	+ ·0006	−29 53 52·18	− ·01	19·498	·106	+ ·001	27 : 28	7·35 : 7·32	212
49	4·5	71 Piscium ε	57 45·109	+ ·042	3·1099	+ ·0088	− ·0054	+ 7 21 6·40	− ·22	19·442	·121	+ ·028	24 : 25	7·83 : 7·71	226
50	6·3	Lacaille 288	57 48·137	− ·005	2·5487	− ·0247	+ ·0006	−57 32 26·84	− ·13	19·427	·101	+ ·015	23 : 24	8·48 : 8·41	227

28. 5·9, 6·6 ; very close binary.
30. 6·6, 6·7 ; very close binary.

No.	Mag.	Name.	Mean R.A. 1900·0.	$\mu_\alpha\Delta$E.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	Mean Dec. 1900·0.	$\mu_\delta\Delta$E.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	No. of Obs.	Epoch 1900+.	Boss No.
			h m s	s	s	s	s	° ′ ″	″	″	″	″			
51	6·2	26 Ceti	0 58 40·268	− ·077	+ 3·0851	+ ·0054	+·0079	+ 0 49 50·65	+ ·33	+19·360	− ·122	− ·034	22	9·73	230
52	5·9	72 Piscium	0 59 48·552	+ ·002	3·1607	+ ·0129	−·0002	+14 24 30·63	− ·41	19·412	·127	+ ·044	16 : 17	9·37	234
53†	3·3	Phœnicis *m.* β	1 1 37·349	+ ·032	2·6840	− ·0179	−·0042	−47 15 14·75	+ ·10	19·313	·112	− ·014	27 : 30	7·58 : 7·41	245
54	5·7	80 Piscium e	3 12·885	+ ·171	3·0868	+ ·0078	−·0182	+ 5 7 12·84	+ 1·71	19·108	·130	− ·181	16	9·42	252
55	5·5	Toucani ι	3 21·143	− ·101	2·3884	− ·0248	+·0111	−62 18 34·05	− ·13	19·301	·103	+ ·015	18 : 20	9·10 : 8·98	254
56	3·5	31 Ceti η	1 3 33·705	− ·126	+ 3·0172	·0000	+·0141	−10 42 45·66	+ 1·20	+19·148	− ·129	− ·133	30 : 35	8·96 : 9·00	255
57	2·1	43 Andromedæ β	4 7·975	− ·144	3·3466	+ ·0289	+·0149	+35 5 25·01	+ 1·11	19·152	·143	− ·115	16	9·68	259
58	5·3	82 Piscium g	5 35·730	+ ·016	3·2964	+ ·0249	−·0017	+30 53 34·13	+ ·13	19·217	·144	− ·014	16 : 17	9·45	269
59	4·8	84 Piscium χ	6 4·640	− ·013	3·2158	+ ·0170	+·0014	+20 30 10·86	− ·06	19·225	·142	+ ·006	16	9·39	270
60	4·6	83 Piscium τ	6 9·080	− ·043	3·2936	+ ·0238	+·0055	+29 33 31·55	+ ·29	19·180	·145	− ·038	25 : 28	7·78 : 7·57	271
61	6·2	Lacaille 328	1 8 9·142	− ·055	+ 2·7692	− ·0125	+·0071	−38 23 11·28	+ ·26	+19·134	− ·127	− ·033	25 : 26	7·81 : 7·73	280
62	5·5	86 Piscium *pr.* ζ	8 30·450	− ·089	3·1299	+ ·0091	+·0089	+ 7 2 47·11	+ ·51	19·106	·143	− ·052	21 : 23	9·96 : 9·82	282
63	5·3	37 Ceti	9 21·880	− ·079	3·0215	+ ·0016	+·0084	− 8 27 34·35	− 2·51	19·404	·140	+ ·268	17	9·37	285
64	5·4	89 Piscium f	12 38·371	+ ·032	3·0914	+ ·0073	−·0034	+ 3 5 16·50	+ ·22	19·025	·148	− ·023	17 : 18	9·40	295
65	4·8	90 Piscium υ	13 58·112	− ·013	3·2876	+ ·0219	+·0017	+26 44 18·56	+ ·09	19·000	·160	− ·012	25 : 27	7·83 : 7·80	300
66	5·5	91 Piscium l	1 15 35·482	− ·017	+ 3·3064	+ ·0232	+·0018	+28 12 56·33	+ ·71	+18·890	− ·164	− ·076	16	9·36	303
67	6·0	Lacaille 384	18 51·784	− ·002	2·7966	− ·0080	+·0002	−31 28 0·44	+ ·45	18·817	·146	− ·055	21	8·13	311
68	3·7	45 Ceti θ	19 1·457	+ ·041	2·9978	+ ·0018	−·0054	− 8 41 59·33	+ 1·59	18·654	·155	− ·213	23 : 24	7·67 : 7·47	• 313
69	5·8	Lacaille 409	21 37·831	...	2·0779	− ·0146	...	−64 53 22·10	...	18·789	·114	...	27 : 28	7·66 : 7·60	...
70	3·3	Phœnicis γ	24 1·413	+ ·025	2·6096	− ·0125	−·0028	−43 49 51·53	+ 1·98	18·496	·144	− ·219	18 : 19	9·04	329
71	5·2	48 Ceti	1 24 48·346	− ·037	+ 2·8796	− ·0036	+·0040	−22 8 47·64	− ·02	+18·692	− ·160	+ ·002	17	9·31	331
72	5·2	98 Piscium μ	24 56·869	− ·188	3·1394	+ ·0091	+·0194	+ 5 37 41·54	+ ·43	18·642	·174	− ·044	18	9·67 : 9·69	332
73†	3·8	99 Piscium *pr.* η	26 7·882	− ·019	3·2042	+ ·0142	+·0020	+14 49 49·38	+ ·09	18·638	·179	− ·010	16 : 18	9·31 : 9·32	335
74	4·0	Phœnicis δ	27 5·465	− ·111	+ 2·5029	− ·0138	+·0129	−49 35 30·78	− 1·28	18·766	− ·144	+ ·149	20	8·60	336
75	8·1*	Gilliss P.Z. 939	30 25·79	...	−10·684	+ 5·883	.	−87 51 40·28	...	18·506	+ ·591	...	16	11·56	...
76	5·8	102 Piscium π	1 31 47·723	+ ·048	+ 3·1745	+ ·0125	−·0051	+11 37 48·96	− ·35	+18·497	− ·188	+ ·037	18	9·38	356
77	6·3	Lacaille 505	32 58·972	+ ·096	0·3428	+ ·1158	−·0128	−79 0 45·12	+ ·89	18·301	·027	− ·118	47	7·52	358
78	0·3	Eridani α	33 59·606	− ·101	2·2391	− ·0130	+·0111	−57 44 41·24	+ ·26	18·355	·139	− ·029	19	9·08	363
79	4·7	106 Piscium ν	36 13·566	+ ·011	+ 3·1184	+ ·0091	−·0014	+ 4 58 53·99	− ·01	18·307	− ·193	+ ·001	33 : 34	7·74 : 7·41	378
80	8·7*	Gilliss P.Z. 1219	37 25·69	...	−27·909	+29·324	...	−88 58 50·65	...	18·263	+1·670	...	11	11·56	...
81	5·9	Lacaille 501	1 37 38·486	+ ·029	+ 2·6473	− ·0081	−·0037	−37 20 12·42	+ ·15	+18·236	− ·167	− ·019	23 : 21	7·91 : 8·07	386
82	3·5	52 Ceti τ	39 24·419	+ ·924	2·7868	+ ·0009	−·1195	−16 27 44·07	− 6·62	19·046	·170	+ ·856	23	7·73	391
83	4·4	110 Piscium o	40 6·770	− ·042	3·1630	+ ·0112	+·0046	+ 8 39 16·83	− ·46	18·215	·203	+ ·051	23 : 24	9·05 : 9·03	393
84†	5·5	Sculptoris *pr.* ε	40 57·888	− ·109	+ 2·8115	− ·0038	+·0116	−25 33 8·74	+ ·54	18·076	·183	− ·057	16	9·39	396
85	6·5	Hydri τ^1	41 17·735	− ·199	− 0·0368	+ ·1599	+·0215	−79 39 7·37	− ·20	18·142	·006	+ ·021	35	9·26 : 9·30	399
86	5·6	Lacaille 520	1 42 10·812	− ·015	+ 2·3542	− ·0107	+·0016	−51 18 58·49	+ ·18	+18·068	− ·156	− ·019	18 : 17	9·44	400
87	5·3	Eridani g^2	42 17·724	− ·126	+ 2·2911	− ·0109	+·0135	−54 1 25·80	− ·57	18·144	− ·153	+ ·061	17 : 18	9·32	401
88	5·8	Lacaille 634	43 8·71	− ·22	− 3·942	+ 1·172	+·019	−85 16 29·04	− ·26	18·080	+ ·241	+ ·029	56 : 150	11·64 : 8·87	406
89	4·8	53 Ceti χ	44 40·306	+ ·102	+ 2·9450	+ ·0022	−·0108	−11 10 52·38	+ ·74	17·913	− ·197	− ·079	17 : 16	9·41 : 9·40	411
90	6·1	54 Ceti	45 33·466	+ ·045	3·1783	+ ·0123	−·0047	+10 32 53·33	+ ·26	17·931	·213	− ·027	16	9·52	414
91	3·8	55 Ceti ζ	1 46 31·487	− ·023	+ 2·9602	+ ·0024	+·0025	−10 49 44·91	+ ·29	+17·888	− ·201	− ·032	29 : 26	9·37 : 9·15	416
92	3·4	2 Trianguli α	47 22·729	− ·011	3·4094	+ ·0248	+·0013	+29 5 28·22	+ 1·91	17·654	·232	− ·232	20 : 22	8·44 : 8·25	421
93	4·8	111 Piscium ξ	48 22·696	− ·014	3·1025	+ ·0084	+·0015	+ 2 41 38·72	− ·23	17·872	·214	+ ·025	22 : 19	9·25 : 9·14	426
94	2·7	6 Arietis β	49 6·921	− ·067	3·3060	+ ·0183	+·0068	+20 19 8·35	+ 1·11	17·706	·229	− ·111	17 : 19	9·84 : 9·96	428
95	4·3	Phœnicis ψ	49 38·210	+ ·078	2·4084	− ·0088	−·0090	−46 47 33·16	+ ·79	17·704	·169	− ·092	19 : 20	8·70 : 8·58	429
96	5·3	Phœnicis φ	1 50 13·077	+ ·033	+ 2·4923	− ·0080	−·0038	−42 59 15·44	+ ·28	+17·740	− ·175	− ·032	19 : 20	8·81 : 8·73	433
97†	3·7	Eridani χ	52 4·611	− ·586	2·3383	− ·0097	+·0726	−52 6 21·15	− 2·24	17·983	·172	+ ·285	23 : 25	8·07 : 7·87	438
98	4·9	9 Arietis λ	52 21·178	+ ·064	3·3340	+ ·0203	−·0068	+23 6 30·27	+ ·17	17·668	·236	− ·018	16	9·39	441
99	4·8	Hydri η^2	52 24·079	− ·101	1·5142	+ ·0093	+·0110	−68 8 20·27	− ·84	17·777	·112	+ ·093	18 : 21	9·18 : 9·03	442
100	4·1	59 Ceti υ	55 17·687	− ·083	2·8270	− ·0012	+·0093	−21 33 44·46	+ ·17	17·543	·207	− ·020	21 : 23	8·92 : 8·62	453

53. 4·1, 4·1 ; close binary.
73. 3·8, 11 — 1″·0 — 15° — 1901·0.
84. 5·5, 9·5 — 4″·7 — 54° — 1902·9.
97. 3·7, 12 — 6″·2 — 198° — 1900·0.

No.	Mag.	Name.	Mean R.A. 1900·0.	$\mu_\alpha\Delta E$.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	Mean Dec. 1900·0.	$\mu_\delta\Delta E$.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	No. of Obs.	Epoch 1900+.	Boss No.
			h m s	s	s	s	s	° ′ ″	″	″	″	″			
101	5·6	Lacaille 599	1 55 31·514	+·046	+2·4751	−·0072	−·0055	−42 30 47·29	+·85	+17·449	−·181	−·104	20 : 21	8·30 : 8·15	456
102	2·9	Hydri α	1 55 37·480	−·323	1·8901	−·0034	+·0355	−62 3 22·33	−·40	17·594	·143	+·044	19 : 21	9·11 : 9·09	458
103	4·8	Fornacis ν	2 0 0·511	−·007	+2·6909	−·0035	+·0009	−29 46 35·84	−·02	17·363	−·204	+·002	25 : 26	7·89 : 7·79	474
104	8·1	Lacaille 760	1 0·85	...	−5·524	+1·524	...	−85 31 16·35	...	17·317	+·399	...	30 : 46	11·62 : 10·11	...
105	2·0	13 Arietis α	1 32·167	−·113	+3·3728	+·0204	+·0137	+22 59 21·50	+1·16	17·148	−·257	−·146	25 : 24	8·22 : 7·94	477
106	7·2	Lacaille 764	2 3 13·30	...	−5·138	+1·347	...	−85 14 3·97	...	+17·218	+·376	...	37 : 59	11·61 : 10·30	...
107	3·0	4 Trianguli β	3 35·525	−·101	+3·5566	+·0305	+·0123	+34 30 51·98	+·38	17·156	−·274	−·046	21 : 22	8·21 : 8·28	482
108	7·0	Lacaille 641	4 1·629	+·002	2·4445	−·0060	−·0002	−42 21 17·58	+·16	17·163	·191	−·019	20 : 23	8·85 : 8·48	484
109	6·1	15 Arietis	5 4·980	−·059	3·3178	+·0177	+·0062	+19 1 42·95	+·27	17·107	·259	−·028	16	9·47	491
110	7·2	Lacaille 657	5 38·398	−·025	2·3526	−·0061	+·003*	−45 56 19·01	+·41	17·109	·186	−·05*	20	8·24	...
111	4·6	65 Ceti ξ^1	2 7 41·908	+·016	+3·1747	+·0116	−·0017	+ 8 22 39·95	+·07	+17·008	−·252	−·007	23 : 25	9·65 : 9·67	505
112	5·4	Fornacis μ	8 30·289	−·014	2·6438	−·0032	+·0018	−31 11 33·99	−·01	16·979	·212	+·002	25 : 26	7·54 : 7·49	506
113	6·2	Lacaille 682	10 29·150	+·026	2·4289	−·0050	−·0031	−41 37 57·01	+·27	16·851	·198	−·033	20	8·25	512
114	4·1	9 Trianguli γ	11 22·032	−·029	3·5534	+·0292	+·0034	+33 23 4·96	+·44	16·792	·288	−·051	20 : 21	8·64 : 8·55	517
115	5·9	67 Ceti	11 59·780	−·058	2·9906	+·0049	+·0061	− 6 52 59·39	+·99	16·705	·245	−·108	19	9·43 : 9·15	518
116	5·7	22 Arietis θ	2 12 33·670	+·009	+3·3292	+·0180	−·0010	+19 26 19·33	+·05	+16·780	−·272	−·006	18	9·01	521
117	3·8	Eridani φ	12 56·306	−·073	2·1438	−·0045	+·0081	−51 58 30·01	+·26	16·739	·179	−·029	19	8·99 : 8·85	524
118	var.	68 Ceti o	14 17·645	+·001	3·0279	+·0062	−·0001	− 3 25 55·99	+2·27	16·466	·251	−·237	20 : 18	9·68 : 9·57	530
119	5·5	Fornacis κ	17 58·112	−·113	2·7458	−·0007	+·0147	−24 16 14·82	+·47	16·462	·235	−·061	24	7·66	543
120	5·6	24 Arietis ξ	19 27·344	−·008	3·2100	+·0127	+·0008	+10 9 28·26	+·14	16·434	·275	−·015	17 : 18	9·40 : 9·29	546
121	4·3	Hydri δ	2 19 57·969	+·089	+1·0536	+·0290	−·0102	−69 6 52·08	−·11	+16·435	−·094	+·012	20	8·75	548
122	5·0	72 Ceti ρ	21 7·124	+·016	2·8961	·0032	−·0017	−12 44 29·09	+·09	16·356	·251	−·009	16	9·63	551
123	5·6	Horologii λ	22 6·028	+·097	1·6731	·0043	−·0120	−60 45 35·38	+1·06	16·180	·148	−·135	21 : 24	8·06 : 7·87	557
124	6·2	Hydri κ	22 16·041	+·214	0·3205	·0766	−·0230	−74 5 55·35	+·01	16·306	·032	−·001	19	9·32 : 9·17	558
125	4·4	73 Ceti ξ^2	22 50·483	−·024	3·1847	·0116	+·0026	+ 8 0 42·93	+·04	16·274	·278	−·004	24 : 22	9·11 : 9·16	560
126	4·5	Eridani κ	2 23 19·222	−·011	+2·2000	−·0033	+·0012	−48 9 9·32	+·12	+16·240	−·195	−·013	18	9·53	563
127	6·6	27 Arietis	25 21·488	−·024	3·3209	+·0165	+·0025	+17 15 41·36	+·91	16·051	·294	−·097	16	9·41	568
128	4·9	76 Ceti σ	27 20·798	+·052	2·8419	+·0023	−·0055	−15 41 1·81	+1·10	15·927	·254	−·117	16 : 18	9·42	575
129	6·1	Fornacis λ^1	28 56·836	+·020	2·5016	−·0022	−·0026	−35 5 23·18	+·15	15·940	·227	−·020	22 : 24	7·76 : 7·63	579
130	6·5	Lacaille 799	30 30·210	+·014	2·0438	−·0013	−·0016	−51 31 53·21	+·18	15·856	·188	−·021	19 : 21	8·65 : 8·43	587
131	6·2	Piazzi II. 123	2 30 36·938	−1·177	+3·2848	+·0123	+·1208	+ 6 24 49·01	−14·25	+17·335	−·310	+1·463	16	9·74	588
132	5·1	78 Ceti ν	30 37·505	+·021	3·1439	·0103	−·0021	+ 5 9 24·77	+·29	15·842	·286	−·029	20 : 16	10·07 : 10·02	589
133	5·6	32 Arietis ν	33 8·149	+·006	+3·3984	·0192	−·0006	+21 31 44·66	+·24	15·713	−·313	−·023	17 : 16	10·35 : 10·28	597
134	7·9	Lacaille 1884	33 13·90	...	−37·440	29·094	...	−88 49 42·60	...	15·731	+3·377	...	37	11·62	...
135	5·5	Hydri μ	33 47·280	−·402	−1·3882	+·2507	+·0430	−79 32 44·63	+·28	15·671	+·115	−·030	33 : 35	9·36 : 9·44	601
136	5·4	Horologii η	2 34 6·533	−·077	+1·9765	−·0002	+·0079	−52 58 33·20	+·22	+15·661	−·187	−·022	17 : 16	9·71 : 9·82	603
137	4·1	82 Ceti δ	34 21·358	−·007	+3·0715	+·0082	+·0007	− 0 6 10·08	−·01	15·670	−·286	+·001	16	10·20	604
138	7·8	Lacaille 1029	35 30·34	+·24	−9·450	+2·492	−·021	−86 9 42·10	−·04	15·612	+·860	+·005	41 : 116	11·65 : 8·71	N166
139	4·1	Eridani ι	36 43·405	−·103	+2·3673	−·0021	+·0106	−40 17 0·07	+·27	15·511	−·226	−·029	16 : 19	9·67 : 9·22	614
140	5·9	34 Arietis μ	36 43·578	−·023	3·3750	+·0179	+·0022	+19 35 7·11	+·49	15·492	·318	−·047	15	10·47	615
141	4·7	35 Arietis	2 37 34·889	−·003	+3·5101	+·0233	+·0003	+27 16 54·08	+·11	+15·479	−·331	−·013	16 : 17	8·76 : 8·65	620
142	4·3	Hydri ε	38 3·082	−·172	0·9086	·0334	+·0167	−68 41 43·67	−·17	15·482	·092	+·016	16	10·30 : 10·42	621
143†	3·5	86 Ceti *seq.* γ	38 7·022	+·093	3·1044	·0092	−·0098	+ 2 48 50·49	+1·43	15·312	·294	−·150	17	9·52	622
144	4·4	89 Ceti π	39 21·780	+·005	2·8539	·0033	−·0005	−14 16 56·15	+·14	15·379	·273	−·014	16	10·19	627
145	4·3	87 Ceti μ	39 32·277	−·176	3·2377	·0125	+·0190	+ 9 41 30·81	+·25	15·356	·311	−·027	19 : 20	9·25 : 9·15	629
146	4·8	39 Arietis	2 41 57·219	−·108	+3·5615	+·0244	+·0115	+28 49 53·65	+1·18	+15·121	−·344	−·125	16	9·43	634
147	3·5	41 Arietis	44 5·751	−·046	3·5214	+·0227	+·0050	+26 50 53·29	+·98	15·011	·344	−·113	18 : 21	9·11 : 8·67	643
148	4·5	Fornacis β	44 54·389	−·077	2·5121	−·0004	+·0079	−32 49 31·59	−1·53	15·237	·248	+·160	17 : 18	9·76 : 9·58	645
149	5·7	43 Arietis σ	45 58·211	−·021	3·3062	+·0149	+·0021	+14 40 12·23	+·33	14·983	·326	−·033	18 : 16	9·94 : 9·93	648
150	4·9	2 Eridani τ^2	46 30·107	+·031	+2·7204	+·0017	−·0037	−21 24 58·27	+·10	14·973	−·269	−·012	21 : 22	8·33 : 8·07	650

118. *Mira.* L, 1·7–9·6; P, 331^{d}·6.
143. 3·5, 7·4 3″·1 291° 1903·1.

No.	Mag.	Name.	Mean R.A. 1900·0.	$\mu_\alpha\Delta E$	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	Mean Dec. 1900·0.	$\mu_\delta\Delta E$.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	No. of Obs.	Epoch 1900+.	Boss No.
			h m s	s	s	s	s	° ′ ″	″	″	″	″			
151	7·3	Lacaille 1076	2 47 54·87	...	− 8·138	+ 1·766	...	−85 26 27·21	...	+14·903	+ ·787	...	26 : 47	11·61 : 10·08	...
152	4·0	3 Eridani η	51 32·553	− ·050	+ 2·9289	+ ·0050	+·0054	− 9 17 47·50	+ 1·83	14·474	− ·297	− ·215	30 : 24	9·24 : 8·49	665
153	4·8	91 Ceti λ	54 21·247	− ·006	3·2108	+ ·0118	+·0006	+ 8 30 31·96	+ ·06	14·514	·329	− ·006	17 : 16	9·27	679
154	3·5	Eridani pr. θ	54 28·178	+ ·049	2·2741	− ·0002	−·0051	−40 42 18·79	− ·32	14·547	·234	+ ·034	16	9·55	680
155	5·2	Horologii β	56 54·354	− ·003	1·1211	+ ·0214	+·0004	−64 28 7·95	− ·25	14·393	·120	+ ·028	20 : 19	8·73 : 8·79	690
156	2·7	92 Ceti α	2 57 3·072	+ ·008	+ 3·1317	+ ·0097	−·0009	+ 3 41 50·32	+ ·70	+14·279	− ·325	− ·077	20 : 19	9·08 : 9·04	691
157	4·2	11 Eridani τ^3	57 58·864	+ ·100	+ 2·6446	·0016	−·0104	−24 0 59·69	+ ·45	14·253	− ·275	− ·047	16	9·63	696
158	8·1	Lacaille 1203	58 55·08	...	−11·349	2·743	...	−86 16 6·71	...	14·242	+1·158	...	19 : 32	11·60 : 9·88	...
159	5·9	Lacaille 974	2 59 30·773	− ·025	+ 2·0508	·0011	+·0028	−47 22 0·56	+ ·13	14·190	− ·217	− ·015	19 : 20	8·94 : 8·83	701
160	5·3	Horologii μ	3 1 15·303	+ ·091	1·4083	·0119	−·0099	−60 7 32·33	+ ·61	14·031	·151	− ·066	17	9·19	706
161	5·7	Hydri θ	3 2 2·854	− ·080	+ 0·0950	+ ·0715	+·0089	−72 17 34·63	− ·32	+14·084	− ·017	+ ·036	17 : 18	9·03 : 8·88	711
162	8·4	Lacaille 1848	3 53·91	+ ·72	−35·548	20·085	−·062	−88 34 20·98	+ ·25	13·907	+3·726	− ·026	27 : 81	11·65 : 9·43	N198
163	4·6	57 Arietis δ	5 54·635	− ·091	+ 3·4233	·0171	+·0107	+19 20 54·82	+ ·05	13·799	− ·369	− ·006	23 : 25	8·51 : 8·06	718
164†	5·3	94 Ceti seq.	7 40·295	− ·127	3·0591	·0077	+·0135	− 1 34 13·20	+ ·52	13·638	·333	− ·055	17 : 18	9·39 : 9·38	722
165†	6·3	Lacaille 1016. AB	8 55·079	− ·074	2·1068	·0013	+·0085	−44 47 40·22	+ ·04	13·608	·232	− ·005	19 : 21	8·71 : 8·47	728
166	4·9	58 Arietis ζ	3 9 9·077	+ ·017	+ 3·4412	+ ·0176	−·0017	+20 40 25·46	+ ·75	+13·523	− ·374	− ·075	16	9·99	730
167	6·0	Lacaille 1040	10 1·101	− ·013	1·5153	·0094	+·0015	−57 41 44·85	− ·03	13·546	·169	+ ·004	21 : 23	8·69 : 8·50	733
168	7·2	Lacaille 1020	10 44·189	− ·030	2·3592	·0009	+·0030	−35 55 46·03	− ·21	13·518	·260	+ ·022	17 : 18	9·84 : 9·53	737
169	5·0	13 Eridani ζ	10 58·515	+ ·003	2·9120	·0055	−·0003	− 9 11 27·58	− ·42	13·525	·320	+ ·045	16	9·27	739
170	5·1	96 Ceti κ	14 7·081	− ·156	3·1426	·0095	+·0177	+ 3 0 13·56	− ·83	13·370	·351	+ ·094	16 : 17	8·80 : 8·87	752
171	6·1	Lacaille 1058	3 14 11·009	+ ·013	+ 1·9538	+ ·0028	−·0015	−48 7 4·96	− ·13	+13·288	− ·219	+ ·017	19 : 23	8·35 : 7·89	754
172	5·4	61 Arietis τ	15 27·134	− ·020	3·4565	+ ·0174	+·0021	+20 47 11·65	+ ·27	13·158	·385	− ·030	21 : 16	9·50 : 9·08	761
173	4·4	Eridani e	15 58·415	−2·338	+ 2·3994	− ·0005	+·2824	−43 27 1·67	− 6·07	13·904	− ·296	+ ·748	19 : 22	8·28 : 8·12	764
174	5·7	Hydri ι	18 26·810	− ·293	− 1·5826	+ ·1927	+·0347	−77 45 11·77	− ·55	13·056	+ ·166	+ ·066	36 : 42	8·45 : 8·39	776
175	3·6	1 Tauri o	19 25·794	+ ·042	+ 3·2238	+ ·0114	−·0045	+ 8 40 36·61	+ ·70	12·846	− ·364	− ·078	20 : 19	9·33 : 8·98	778
176	3·7	2 Tauri ξ	3 21 44·940	− ·038	+ 3·2466	+ ·0116	+·0040	+ 9 23 2·89	+ ·38	+12·727	− ·371	− ·041	17 : 18	9·40 : 9·25	784
177	6·7	Lacaille 1107	22 37·288	− ·019	2·1442	·0020	+·0021	−41 59 14·19	− ·26	12·738	·247	+ ·029	17 : 19	8·99 : 8·84	793
178	5·3	4 Tauri s	24 56·443	+ ·005	3·2742	·0122	−·0006	+10 59 36·20	+ ·16	12·533	·377	− ·019	16 : 17	8·56 : 8·66	801
179	4·4	5 Tauri f	25 21·053	− ·009	3·3067	·0129	+·0012	+12 35 38·93	+ ·03	12·520	·382	− ·004	21 : 25	7·18 : 7·08	804
180	6·3	Lacaille 1130	27 24·527	− ·068	1·9248	·0036	+·0082	−47 42 59·68	− ·13	12·399	·227	+ ·016	19 : 21	8·33 : 8·23	811
181	4·9	Reticuli κ	3 27 38·263	− ·494	+ 1·0362	+ ·0228	+·0542	−63 17 20·03	− 3·30	+12·737	− ·130	+ ·369	19	9·12 : 8·94	812
182	3·7	18 Eridani ε	28 12·542	+ ·575	2·8247	·0056	−·0657	− 9 47 47·89	− ·11	12·340	·322	+ ·013	21 : 19	8·75 : 8·25	814
183	4·3	19 Eridani τ^5	29 22·248	− ·026	2·6489	·0030	+·0028	−21 58 5·68	+ ·19	12·227	·311	− ·020	20 : 21	9·17 : 9·33	816
184	5·8	Lacaille 1144	29 35·857	− ·059	1·7845	·0053	+·0066	−50 43 3·50	− ·76	12·318	·212	+ ·086	19 : 21	8·89 : 8·80	818
185	4·4	10 Tauri	31 45·980	+ ·141	3·0583	·0076	−·0156	+ 0 4 59·48	+ 4·37	11·599	·359	− ·482	16	9·06	825
186	4·6	Eridani y	3 33 30·340	+ ·006	+ 2·1522	+ ·0023	−·0007	−40 36 9·53	+ ·36	+11·916	− ·257	− ·043	21 : 23	8·36 : 8·32	827
187	5·8	Brisbane 593	33 37·084	+ ·032	− 2·2950	·2315	−·0040	−78 41 11·92	+ ·22	11·923	+ ·264	− ·028	48 : 49	8·04 : 7·95	828
188	6·2	11 Tauri	34 47·827	− ·010	+ 3·5758	·0188	+·0011	+25 0 22·23	+ ·14	11·853	− ·425	− ·015	18	9·25	836
189†	3·8	38 Persei m. o	38 2·747	− ·007	3·7524	·0233	+·0008	+31 58 17·63	+ ·20	11·614	·450	− ·024	21 : 22	8·50 : 8·40	844
190	5·1	Fornacis δ	38 16·220	+ ·003	2·3847	·0023	−·0004	−32 15 27·63	− ·06	11·629	·288	+ ·007	20 : 21	8·03 : 7·94	846
191	3·7	23 Eridani δ	3 38 27·370	+ ·057	+ 2·8719	+ ·0062	−·0063	−10 5 59·94	− 6·77	+12·352	− ·346	+ ·743	18 : 19	9·11	848
192	3·8	17 Tauri	38 56·142	− ·014	3·5550	·0177	+·0014	+23 47 55·81	+ ·50	11·525	·428	− ·050	16	9·97	852
193	2·8	25 Tauri η	41 32·306	− ·010	3·5588	·0175	+·0014	+23 47 45·36	+ ·34	11·340	·432	− ·048	23	7·27 : 7·11	869
194	4·3	27 Eridani τ^6	42 32·622	+ ·105	+ 2·5798	·0025	−·0118	−23 32 47·03	+ 4·63	10·792	− ·314	− ·523	19 : 18	8·87 : 8·86	873
195	8·1	Lacaille 1414	42 37·13	...	− 9·659	1·430	...	−85 2 47·76	...	11·310	+1·158	...	36 : 53	11·60 : 10·31	...
196	3·8	Reticuli β	3 42 57·046	− ·437	+ 0·7377	+ ·0282	+·0472	−65 7 16·51	− ·68	+11·359	− ·099	+ ·073	17	9·25	875
197	3·7	27 Tauri	43 12·866	− ·013	3·5601	·0173	+·0014	+23 44 51·50	+ ·43	11·217	·434	− ·050	17 : 19	9·04 : 8·69	877
198	5·2	28 Eridani τ^7	43 21·615	− ·032	2·5789	·0030	+·0032	−24 11 3·42	− ·54	11·310	·316	+ ·054	16 : 17	9·94 : 9·91	880
199	4·2	Eridani g	45 42·692	+ ·029	2·2441	·0025	−·0042	−36 30 10·96	+ ·35	11·036	·277	− ·050	26 : 28	6·98 : 6·94	888
200	2·8	44 Persei ζ	47 50·619	− ·009	3·7622	·0220	+·0010	+31 35 12·34	+ ·14	10·913	·464	− ·017	20 : 22	8·50 : 8·45	894

164. 5·3, 11·5	4″·6	250°	1896·2.
165. AB 6·7, 7·5	0″·8	182°	1901·1.
AC 10·5	3″·5	211°	1900·0.
189. 3·8, 8·5	0″·9	51°	1901·7.

No.	Mag.	Name.	Mean R. A. 1900·0.	$\mu_\alpha\Delta E$.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	Mean Dec. 1900·0.	$\mu_\delta\Delta E$.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	No. of Obs.	Epoch 1900+.	Boss No.
			h m s	s	s	s	s	° ′ ″	″	″	″	″			
201	3·1	Hydri ....γ	3 48 47·080	− ·088	− 0·9798	+ ·1071	+·0110	−74 32 42·84	− ·92	+10·977	+ ·115	+ ·116	21 : 22	8·01 : 7·92	899
202	5·3	Eridani ....ι	49 50·317	− ·024	+ 2·2854	·0026	+·0028	−35 1 40·31	+ ·15	10·765	− ·286	− ·018	16 : 17	8·43 : 8·53	903
203	6·4	Lacaille 1304	51 56·348	...	1·5695	·0078	...	−52 58 54·90	...	10·628	·198	...	20 : 22	7·48 : 7·32	N249
204	4·1	46 Persei ....ξ	52 28·422	− ·010	3·8830	·0245	+·0011	+35 30 13·55	+ ·11	10·576	·485	− ·012	16 : 17	8·97 : 9·03	913
205	3·1	34 Eridani ....γ	53 21·847	− ·040	2·7977	·0045	+·0046	−13 47 35·51	+ ·97	10·410	·352	− ·112	22 : 24	8·62	915
206	var.	35 Tauri ....λ	3 55 8·330	+ ·003	+ 3·3192	+ ·0114	−·0004	+12 12 28·15	+ ·12	+10·375	− ·418	− ·014	21 : 23	8·03 : 8·28	920
207	7·4	Lacaille 1318	55 23·356	− ·014	1·7160	·0061	+·0017	−49 53 45·66	− ·26	10·403	·219	+ ·032	20	7·99	922
208	4·7	36 Eridani ....τ^9	55 39·657	− ·005	2·5562	·0032	+·0006	−24 17 59·15	− ·03	10·354	·324	+ ·004	18 : 20	8·76 : 8·47	923
209	4·5	Reticuli ....δ	57 9·695	− ·007	0·9406	·0194	+·0007	−61 40 57·14	+ ·18	10·219	·122	− ·019	16	9·55	930
210	4·0	38 Tauri ....ν	57 50·160	− ·001	3·1876	·0092	+·0001	+ 5 42 43·25	+ ·05	10·180	·404	− ·007	23 : 26	7·95 : 7·61	932
211	4·5	37 Tauri ....A	3 58 46·953	− ·063	+ 3·5407	+ ·0151	+·0067	+21·48 31·25	+ ·60	+10·052	− ·451	− ·064	17	9·35	936
212	5·3	42 Tauri ....ψ	4 0 49·342	+ ·055	3·7019	·0187	−·0062	+28 43 51·24	− ·03	9·964	·472	+ ·003	17	8·82	944
213	5·7	Lacaille 1344	1 30·207	− ·100	2·4713	·0031	+·0147	−27 55 30·79	− ·70	10·013	·319	+ ·103	26 : 29	6·83 : 6·77	948
214	5·9	43 Tauri	3 20·395	− ·065	3·4895	·0136	+·0075	+19 20 41·51	+ ·39	9·726	·449	− ·043	19 : 22	8·70 : 8·96	952
215	5·6	44 Tauri ....p	4 44·319	+ ·018	3·6470	·0168	−·0020	+26 13 11·97	+ ·33	9·625	·470	− ·037	16	8·95	955
216	6·7	Lacaille 1376	4 5 27·789	− ·049	+ 1·8593	+ ·0047	+·0071	−46 7 44·29	− ·06	+ 9·616	− ·243	+ ·009	25 : 26	6·94 : 6·92	959
217	4·2	38 Eridani ....o^1	6 59·001	− ·005	2·9263	·0058	+·0006	− 7 5 53·01	− ·61	9·571	·380	+ ·081	20 : 22	7·58 : 7·47	963
218†	5·2	39 Eridani ....*pr.* A	9 38·220	+ ·006	2·8519	·0049	−·0008	−10 30 17·87	+ 1·27	9·128	·372	− ·157	16	8·10	978
219	4·4	49 Tauri ....μ	10 6·193	− ·017	3·2544	·0094	+·0019	+ 8 38 30·59	+ ·18	9·229	·426	− ·020	16	8·81	981
220	4·5	40 Eridani ....o^2	10 38·714	+1·439	2·7611	·0016	−·1484	− 7 49 3·01	+32·53	5·770	·342	−3·435	21 : 18	9·70 : 9·47	984
221	3·8	Horologii ....α	4 10 41·294	− ·026	+ 1·9865	+ ·0035	+·0037	−42 32 28·31	+ 1·51	+ 8·988	− ·262	− ·215	26 : 28	7·07 : 7·00	985
222	3·3	Reticuli ....α	13 8·128	− ·044	0·7624	·0215	+·0054	−62 43 26·36	− ·48	9·071	·104	+ ·059	19	8·10	994
223	4·4	Doradûs ....γ	13 24·426	− ·069	1·5675	·0079	+·0098	−51 44 18·07	− 1·26	9·171	·209	+ ·180	21 : 22	7·00 : 6·98	995
224	5·2	54 Persei	13 54·903	+ ·023	3·8863	·0206	−·0025	+34 19 31·57	+ ·14	8·937	·510	− ·015	16	9·27	999
225	3·8	54 Tauri ....γ	14 6·143	− ·072	3·4097	·0113	+·0081	+15 23 10·20	+ ·23	8·910	·450	− ·027	21	8·93 : 8·66	1000
226†	3·6	41 Eridani ....*m.* υ^4	4 14 6·650	− ·042	+ 2·2688	+ ·0031	+·0047	−34 2 32·54	+ ·03	+ 8·933	− ·300	− ·003	16	8·96	1001
227	5·5	Lalande 8205	16 17·277	− ·021	2·6170	·0037	+·0031	−20 52 41·18	+ ·03	8·760	·347	− ·005	26 : 28	6·84 : 6·72	1012
228	4·0	61 Tauri ....δ	17 10·051	− ·061	3·4553	·0118	+·0077	+17 18 28·80	+ ·26	8·663	·458	− ·033	25 : 28	7·88 : 7·91	1017
229	4·4	68 Tauri	19 42·230	− ·051	3·4661	·0117	+·0075	+17 41 57·04	+ ·20	8·471	·462	− ·025	17	8·09	1029
230	4·0	43 Eridani ....d	20 16·831	− ·033	2·2517	·0033	+·0045	−34 14 55·80	− ·40	8·505	·302	+ ·055	21 : 23	7·31 : 7·26	1032
231	5·3	Reticuli ....η	4 20 48·442	− ·107	+ 0·6383	+ ·0237	+·0125	−63 37 23·54	− 1·52	+ 8·585	− ·090	+ ·177	19 : 20	8·59 : 8·58	1035
232	3·6	74 Tauri ....ε	22 46·613	− ·069	3·4988	·0119	+·0080	+18 57 31·22	+ ·32	8·213	·469	− ·038	23 : 22	8·63 : 8·30	1044
233	5·4	Cœli ....δ	27 46·325	+ ·002	1·8351	·0048	−·0003	−45 10 6·00	+ ·09	7·839	·250	− ·012	21 : 22	7·77 : 7·69	1066
234	4·8	86 Tauri ....ρ	28 10·404	− ·056	+ 3·4006	·0100	+·0069	+14 38 3·04	+ ·21	7·793	− ·461	− ·026	17	8·10	1067
235	7·9	Lacaille 1839	29 8·41	..	−17·030	2·287	...	−86 29 26·36	...	7·741	+2·287	...	23 : 30	11·46 : 10·28	...
236	0·9	87 Tauri ....α	4 30 10·930	− ·035	+ 3·4385	+ ·0102	+·0048	+16 18 28·58	+ 1·40	+ 7·466	− ·467	− ·191	22	7·31	1077
237	4·1	48 Eridani ....ν	31 19·298	·000	2·9954	·0058	·0000	− 3 33 24·92	+ ·02	7·563	·408	− ·002	19 : 17	9·48 : 9·34	1079
238	3·8	52 Eridani ....υ^2	31 39·698	+ ·043	2·3305	·0032	−·0046	−30 46 1·33	+ ·04	7·533	·318	− ·004	18	9·29	1080
239	3·4	Doradûs ....α	31 50·121	− ·061	1·2926	·0097	+·0061	−55 15 5·70	+ ·02	7·521	·179	− ·002	16	10·04	1081
240	4·0	53 Eridani	33 35·972	+ ·050	2·7456	·0040	−·0054	−14 29 59·36	+ 1·51	7·219	·374	− ·161	18	9·35	1091
241	6·9	Lacaille 1543	4 34 3·907	− ·018	+ 1·9517	+ ·0042	+·0020	−42 4 28·18	− ·41	+ 7·388	− ·268	+ ·046	17	8·96	1094
242	7·1	Lacaille 1707	34 29·03	+ ·13	− 7·246	·527	−·011	−83 6 55·59	− ·08	7·317	+ ·982	+ ·009	38 : 168	11·49 : 8·50	1096
243	5·8	Lacaille 1544	35 57·193	+ ·040	+ 2·4942	·0034	−·0049	−24 40 40·11	− ·15	7·207	− ·342	+ ·019	17	8·15	1104
244	4·3	94 Tauri ....τ	36 14·498	− ·003	3·5965	·0119	+·0004	+22 45 54·55	+ ·17	7·142	·493	− ·022	27 : 28	7·69 : 7·67	1107
245†	4·6	Cœli ....*pr.* α	37 20·277	+ ·106	1·9312	·0040	−·0130	−42 3 17·07	+ ·73	6·985	·265	− ·089	20	8·18	1110
246	5·4	Pictoris ....λ	4 40 12·535	+ ·035	+ 1·5341	+ ·0068	−·0050	−50 40 9·29	− ·22	+ 6·870	− ·212	+ ·031	23	7·07 : 7·24	1119
247	4·2	57 Eridani ....μ	40 30·105	− ·011	2·9981	·0054	+·0013	− 3 26 16·56	+ ·08	6·805	·414	− ·010	34 : 35	8·10 : 8·01	1123
248	5·5	Doradûs ....κ	42 50·589	− ·005	+ 0·8955	·0141	+·0007	−59 54 57·73	− ·26	6·659	− ·126	+ ·037	22	7·11 : 7·08	1130
249	5·9	Mensæ ....μ	44 3·621	+ ·003	− 0·6222	·0477	−·0004	−71 6 51·21	− ·24	6·553	+ ·083	+ ·031	20 : 22	7·83 : 7·80	1138
250	3·2	1 Orionis ....π^3	44 24·913	− ·265	+ 3·2544	·0071	+·0316	+ 6 47 12·04	− ·16	6·513	− ·456	+ ·020	19 : 18	8·40 : 8·21	1140

206. L, 3·8–4·2; P, $3^d·95$.
218. 5·2, 10·0 6″·4 150° 1888·1.
226. 4·0, 5·0 0″·5 330° 1898·1.
245. 4·6, 12 5″·8 112° 1901·4.

No.	Mag.	Name.	Mean R.A. 1900·0.	$\mu_\alpha\Delta E$.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	Mean Dec. 1900·0.	$\mu_\delta\Delta E$.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	No. of Obs.	Epoch 1900+.	Boss No.
			h m s	s	s	s	s	° ′ ″	″	″	″	″			
251	5·2	97 Tauri..... ι	4 45 31·421	− ·050	+ 3·5062	+ ·0097	+ ·0059	+18 40 10·95	+ ·30	+ 6·364	− ·488	− ·036	18 : 19	8·40 : 8·30	1143
252	3·8	3 Orionis.... π^4	45 52·757	+ ·002	3·1926	·0067	− ·0003	+ 5 26 3·34	+ ·04	6·365	·444	− ·006	26	6·77	1147
253	5·1	4 Orionis.... o^1	46 52·460	·000	3·3907	·0083	·0000	+14 5 1·83	+ ·48	6·229	·472	− ·059	16	8·22	1149
254	3·8	8 Orionis.... π^5	49 2·506	+ ·001	3·1228	·0060	− ·0002	+ 2 16 37·27	+ ·02	6·105	·436	− ·003	25 : 26	7·02 : 6·88	1159
255	4·8	7 Orionis.... π^1	49 23·423	− ·030	3·3004	·0072	+ ·0037	+ 9 59 29·73	+ 1·08	5·945	·462	− ·134	22 : 23	8·08 : 8·06	1163
256	2·8	3 Aurigæ.... ι	4 50 28·785	− ·005	+ 3·9016	+ ·0141	+ ·0007	+33 0 28·90	+ ·19	+ 5·961	− ·545	− ·027	23 : 24	7·03 : 7·00	1167
257	5·9	98 Tauri.... k	52 2·119	− ·018	3·6677	·0108	+ ·0022	+24 53 45·91	+ ·48	5·798	·514	− ·060	21 : 22	8·00 : 7·97	1177
258	4·8	102 Tauri.... ι	57 7·063	− ·033	+ 3·5825	·0092	+ ·0048	+21 26 49·95	+ ·32	5·385	− ·506	− ·047	26 : 27	6·88 : 6·86	1194
259	5·4	Mensæ.... η	58 3·490	− ·019	− 1·7626	·0726	+ ·0023	−75 5 25·91	− ·44	5·406	+ ·245	+ ·054	21 : 22	8·06	1197
260	4·8	11 Orionis....	4 58 51·215	− ·011	+ 3·4255	·0076	+ ·0013	+15 15 53·32	+ ·31	5·249	− ·484	− ·036	19 : 20	8·57 : 8·55	1203
261	5·6	Pictoris.... η^1	5 0 11·687	+ ·038	+ 1·5659	+ ·0056	− ·0056	−49 17 33·86	− ·09	+ 5·185	− ·222	+ ·013	22	6·72	1207
262	3·2	2 Leporis.... ε	1 13·642	− ·015	2·5386	·0031	+ ·0019	−22 30 19·60	+ ·54	5·018	·360	− ·067	23 : 25	7·93 : 8·08	1211
263	5·0	Pictoris.... η^2	2 22·572	− ·024	1·5488	·0056	+ ·0035	−49 42 47·96	− ·05	4·995	·221	+ ·007	20	6·85	1218
264	2·8	67 Eridani.... β	2 55·931	+ ·052	2·9482	·0043	− ·0059	− 5 12 57·36	+ ·70	4·861	·418	− ·079	19	8·84	1220
265	4·8	Doradûs.... ζ	3 47·668	+ ·045	+ 1·0233	·0101	− ·0054	−57 36 31·83	− ·88	4·972	− ·146	+ ·105	20 : 22	8·40 : 8·37	1225
266	5·4	Mensæ.... β	5 4 0·390	+ ·018	− 0·7945	+ ·0398	− ·0022	−71 27 2·92	− ·38	+ 4·896	+ ·110	+ ·047	19	8·13	1228
267	4·3	69 Eridani.... λ	4 21·621	− ·002	+ 2·8698	·0040	+ ·0002	− 8 52 56·18	+ ·06	4·811	− ·408	− ·008	23	7·76	1231
268	3·2	5 Leporis.... μ	8 26·349	− ·023	2·6936	·0033	+ ·0028	−16 19 26·02	+ ·22	4·444	·385	− ·028	27 : 26	8·11 : 7·93	1241
269	0·0	19 Orionis.... β	9 43·915	− ·001	2·8817	·0039	+ ·0001	− 8 19 1·71	+ ·01	4·361	·412	− ·001	31 : 32	7·11 : 7·07	1250
270	3·7	20 Orionis.... τ	12 45·028	+ ·008	+ 2·9117	·0039	− ·0011	− 6 57 8·88	+ ·05	4·097	− ·417	− ·007	24 : 26	7·20 : 7·19	1262
271	4·8	Doradûs.... θ	5 13 49·895	+ ·008	− 0·0586	+ ·0210	− ·0010	−67 17 51·91	− ·36	+ 4·059	+ ·007	+ ·048	21	7·60	1269
272	5·0	Columbæ.... o	13 52·724	− ·053	+ 2·1622	·0024	+ ·0065	−34 59 37·63	+ 2·81	3·661	− ·311	− ·346	20	8·12	1270
273	7·8*	Cape 1880. 2449....	13 56·57	...	−34·228	3·972	...	−87 59 21·25	...	4·002	+4·888	...	31 : 41	11·43 : 10·68	...
274	4·3	6 Leporis.... λ	14 58·045	·000	+ 2·7630	·0034	·0000	−13 16 48·07	− ·03	3·917	− ·397	+ ·003	16	8·43	1277
275	5·9	Lacaille 1796....	15 24·505	+ ·006	2·3898	·0029	− ·0008	−27 28 17·74	+ ·10	3·862	·343	− ·014	22 : 23	6·97 : 6·93	1279
276	4·7	22 Orionis.... o	5 16 39·407	+ ·003	+ 3·0610	+ ·0042	− ·0003	− 0 28 52·03	+ ·03	+ 3·766	− ·440	− ·003	27 : 28	8·62 : 8·59	1284
277	5·7	Pictoris.... ζ	16 54·929	− ·004	1·4681	·0059	+ ·0006	−50 42 46·73	− 1·62	3·963	·212	+ ·216	25 : 26	7·44 : 7·48	1287
278	7·2	Lacaille 1836....	19 1·722	− ·024	1·4124	·0055	+ ·0037	−51 40 20·50	− ·15	3·588	·205	+ ·023	23 : 24	6·44 : 6·41	1298
279	4·9	25 Orionis....	19 33·342	+ ·005	3·1119	·0042	− ·0007	+ 1 45 17·39	+ ·14	3·501	·448	− ·018	18 : 19	7·76	1302
280	1·6	24 Orionis.... γ	19 46·018	+ ·004	3·2162	·0046	− ·0005	+ 6 15 32·91	+ ·14	3·482	·463	− ·019	20 : 22	7·81 : 7·61	1303
281	1·6	112 Tauri.... β	5 19 58·197	− ·020	+ 3·7900	+ ·0076	+ ·0024	+28 31 21·69	+ 1·48	+ 3·307	− ·546	− ·177	19	8·35	1304
282	6·1	Lacaille 1850....	21 56·903	+ ·010	1·7840	·0037	− ·0014	−44 18 51·83	+ ·04	3·308	·258	− ·005	29 : 30	7·10 : 7·14	1317
283	6·1	Lacaille 1862....	23 52·739	+ ·006	1·9229	·0035	− ·0009	−41 1 46·78	− ·62	3·234	·278	+ ·088	26 : 27	7·04 : 7·02	1322
284†	2·7	9 Leporis.... *seq.* β	23 57·584	− ·003	2·5703	·0027	+ ·0004	−20 50 21·40	+ ·64	3·045	·372	− ·094	25	6·81	1323
285	4·9	25 Aurigæ.... χ	26 13·070	− ·004	3·9027	·0076	+ ·0005	+32 7 5·69	+ ·13	2·928	·563	− ·016	20 : 19	8·14 : 8·18	1333
286	2·2	34 Orionis.... δ	5 26 53·838	− ·001	+ 3·0638	+ ·0036	+ ·0001	− 0 22 23·26	+ ·02	+ 2·882	− ·443	− ·003	27 : 28	7·37 : 7·38	1339
287	5·7	Lacaille 1888....	27 24·497	+ ·003	1·6458	·0035	− ·0004	−47 8 59·60	+ 1·13	2·688	·238	− ·153	20	7·40	1341
288	3·9	Columbæ.... ε	27 39·746	− ·019	2·1292	·0028	+ ·0022	−35 32 37·69	+ ·42	2·770	·309	− ·049	18 : 19	8·60	1344
289	2·6	11 Leporis.... α	28 19·155	− ·001	2·6451	·0029	+ ·0001	−17 53 37·65	− ·02	2·765	·383	+ ·003	20	7·42	1347
290	4·5	37 Orionis.... ϕ^1	29 19·805	+ ·001	3·2920	·0042	− ·0001	+ 9 25 18·96	+ ·06	2·667	·477	− ·008	23	7·25	1353
291	5·2	43 Orionis.... θ^2	5 30 28·219	− ·007	+ 2·9460	+ ·0032	+ ·0009	− 5 28 54·54	− ·11	+ 2·591	− ·427	+ ·015	18 : 19	7·35	1365
292	2·9	44 Orionis.... ι	30 32·451	− ·002	2·9338	·0032	+ ·0002	− 5 58 31·73	+ ·03	2·566	·425	− ·004	20	7·93 : 7·84	1366
293	1·6	46 Orionis.... ε	31 8·332	·000	3·0430	·0034	·0000	− 1 15 56·67	+ ·02	2·516	·441	− ·002	19	8·16	1370
294	3·0	123 Tauri.... ζ	31 40·049	− ·002	3·5838	·0051	+ ·0002	+21 4 53·84	+ ·23	2·444	·519	− ·028	20 : 22	8·30 : 8·09	1375
295	3·8	Doradûs.... β	32 45·336	+ ·009	0·5161	·0091	− ·0011	−62 33 18·47	− ·11	2·391	·076	+ ·014	20	7·90	1384
296†	3·8	48 Orionis.... *m.* σ	5 33 43·531	·000	+ 3·0107	+ ·0032	·0000	− 2 39 27·73	− ·01	+ 2·294	− ·437	+ ·001	26 : 27	6·80 : 6·77	1389
297	5·2	Mensæ.... γ	35 50·608	− ·207	− 2·4001	·0459	+ ·0263	−76 24 42·08	− 2·34	2·410	+ ·343	+ ·301	40	7·88 : 7·78	1400
298	2·6	Columbæ.... α	36 1·641	− ·002	+ 2·1718	·0027	+ ·0003	−34 7 38·20	+ ·24	2·058	− ·316	− ·035	28 : 31	6·93 : 6·94	1401
299	3·7	13 Leporis.... γ	40 17·483	+ ·137	2·5012	·0020	− ·0201	−22 28 53·91	+ 2·58	1·346	·361	− ·376	32 : 34	6·81 : 6·86	1420
300	6·6	Lacaille 1981....	40 50·875	− ·008	1·7002	·0035	+ ·0011	−45 52 42·31	− ·62	1·761	·248	+ ·088	26	7·08	1421

284. 2·7, 9·6 2″·7 296° 1898·1.
296. 3·8, 5·7 ; very close binary.

No.	Mag.	Name.	Mean R.A. 1900·0.	$\mu_\alpha\Delta E$.	Annual Variation 1900·0.	Sec. Var. 1900·0	Proper Motion.	Mean Dec. 1900·0.	$\mu_\delta\Delta E$.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	No. of Obs.	Epoch 1900+.	Boss No.
			h m s	s	s	s	s	° ′ ″	″	″	″	″			
301	5·7	130 Tauri	5 41 36·305	− ·001	+ 3·4975	+ ·0037	+·0002	+17 41 29·87	+ ·07	+ 1·597	− ·509	− ·010	23 : 24	7·43 : 7·44	1424
302	3·6	14 Leporis ζ	42 25·418	+ ·010	2·7176	·0025	−·0012	−14 51 33·14	− ·02	1·538	·395	+ ·002	33 : 32	7·96 : 7·88	1432
303	2·1	53 Orionis κ	43 0·807	− ·002	2·8446	·0026	+·0002	− 9 42 18·49	+ ·04	1·479	·414	− ·005	20 : 22	7·52	1435
304	7·3	Lacaille 2005	44 20·666	+ ·007	1·8865	·0028	−·0010	−41 37 27·11	+ ·24	1·335	·275	− ·033	21 : 22	7·34 : 7·41	1440
305	4·5	Doradûs δ	44 35·571	+ ·053	0·1028	·0082	−·0062	−65 46 22·67	− ·08	1·357	·015	+ ·010	17	8·48	1443
306	3·9	15 Leporis δ	5 47 1·361	− ·146	+ 2·5804	+ ·0014	+·0172	−20 53 20·43	+ 5·49	+ 0·482	− ·378	− ·653	19 : 21	8·47 : 8·41	1456
307	3·0	Columbæ β	47 26·093	− ·034	2·1136	·0033	+·0039	−35 48 17·62	− 3·43	1·493	·309	+ ·394	17	8·70	1459
308	4·4	Pictoris γ	48 0·661	− ·076	1·0875	·0038	+·0082	−56 11 30·48	+ ·63	0·980	·160	− ·068	17	9·26	1460
309	7·3	Lacaille 2040	48 44·576	− ·024	+ 1·9092	·0027	+·0025	−41 7 44·78	− ·15	1·000	− ·279	+ ·016	16	9·50	1463
310	6·2	Lacaille 2296	49 33·79	+ ·15	−11·711	·152	−·013	−84 50 6·53	− ·72	0·999	+1·707	+ ·086	41 : 144	11·45 : 8·38	N381
311	var.	58 Orionis α	5 49 45·489	− ·015	+ 3·2474	+ ·0026	+·0019	+ 7 23 18·53	− ·06	+ 0·904	− ·474	+ ·008	19 : 20	7·93 : 7·86	1468
312	4·9	139 Tauri	51 47·303	+ ·001	3·7220	·0028	−·0001	+25 56 29·72	+ ·03	0·714	·543	− ·004	22 : 23	7·91 : 7·88	1475
313	3·7	16 Leporis η	51 50·977	+ ·019	2·7319	·0024	−·0028	−14 11 8·38	− ·90	0·845	·398	+ ·132	32	6·81	1476
314	4·4	Columbæ γ	53 59·465	+ ·002	2·1263	·0024	−·0003	−35 17 38·01	− ·02	0·528	·310	+ ·002	24 : 25	7·98 : 8·00	1490
315	3·9	Columbæ η	56 5·135	− ·014	1·8359	·0025	+·0019	−42 49 14·57	+ ·19	0·317	·268	− ·025	22	7·53	1497
316	4·2	61 Orionis μ	5 56 52·861	− ·010	+ 3·3007	+ ·0020	+·0012	+ 9 38 50·26	+ ·24	+ 0·244	− ·481	− ·029	17 : 18	8·39	1501
317	5·7	Mensæ κ	57 1·438	+ ·056	− 4·0604	·0148	−·0067	−79 22 42·59	− ·48	0·317	+ ·593	+ ·057	37 : 38	8·41 : 8·42	1502
318	4·3	1 Geminorum	58 2·457	+ ·005	+ 3·6464	·0017	−·0006	+23 16 7·15	+ ·96	0·063	− ·532	− ·108	20	8·89	1508
319	7·2*	Cape 1880, 2901	59 3·07	...	−43·595	·155	...	−88 21 34·71	...	0·083	+6·357	...	34 : 41	11·47 : 10·90	...
320	5·9	66 Orionis	5 59 41·298	+ ·002	+ 3·1694	·0018	−·0002	+ 4 9 51·80	+ ·10	0·015	− ·462	− ·012	17 : 18	8·43	1514
321	6·6	Lacaille 2137	6 1 35·637	+ ·070	+ 1·7262	+ ·0030	−·0080	−45 2 7·80	− 2·00	+ 0·089	− ·250	+ ·229	17	8·73	1521
322	4·4	67 Orionis ν	1 51·723	− ·005	3·4256	·0015	+·0006	+14 46 49·57	+ ·27	− 0·199	·499	− ·036	23 : 25	7·68 : 7·53	1525
323	5·9	Lacaille 2130	2 14·483	− ·017	2·3108	·0021	+·0022	−29 44 51·04	+ ·33	0·238	·337	− ·042	19 : 21	7·87 : 7·91	1528
324	5·7	Columbæ π^2	4 46·531	+ ·002	1·8631	·0022	−·0003	−42 8 17·70	+ ·10	0·433	·272	− ·015	26 : 27	6·99 : 6·96	1539
325*	5·1	Lacaille 1766	6 8·590	− ·021	+ 0·5480	+ ·0012	+·0028	−62 8 12·38	+ ·53	0·608	·080	− ·071	20	7·43	1546
326	7·1	Lacaille 2512	6 6 9·38	+ ·30	−15·735	− ·117	−·026	−85 55 52·80	− ·01	− 0·538	+2·297	+ ·001	35 : 95	11·45 : 8·96	1547
327	4·4	70 Orionis ξ	6 15·214	− ·005	+ 3·4118	+ ·0011	+·0006	+14 13 52·62	+ ·28	0·581	− ·497	− ·034	17 : 18	8·34 : 8·36	1548
328	5·6	Lacaille 2182	6 56·677	+ ·030	1·9339	·0023	−·0042	−40 20 5·66	− ·38	0·554	·281	+ ·053	24	7·22	1553
329	6·4	Lacaille 2191	7 47·393	+ ·009	1·7234	·0021	−·0011	−45 15 35·06	− ·01	0·680	·250	+ ·001	18 : 20	8·02 : 7·91	1555
330	4·9	Pictoris δ	8 21·020	+ ·018	1·1662	·0018	+·0025	−54 56 46·27	+ ·06	0·738	·169	− ·008	20	7·38	1558
331†	var.	7 Geminorum ... seq. η	6 8 50·416	+ ·032	+ 3·6220	+ ·0005	−·0045	+22 32 9·35	+ ·12	− 0·790	− ·526	− ·017	44 : 47	7·11 : 7·12	1561
332	5·3	74 Orionis k	10 49·734	− ·047	3·3694	·0010	+·0060	+12 18 1·54	− 1·51	0·754	·491	+ ·193	22 : 23	7·85 : 7·84	1577
333	4·5	Columbæ κ	12 59·630	+ ·005	+ 2·1336	+ ·0021	−·0007	−35 6 24·97	− ·52	1·061	− ·310	+ ·075	29 : 30	6·92 : 6·88	1587
334	5·2	Mensæ α	13 13·298	− ·192	− 1·7838	− ·0144	+·0273	−74 43 8·82	+ 1·51	1·370	+ ·256	− ·215	31	7·02	1589
335	5·3	7 Monocerotis	14 53·751	+ ·004	+ 2·8896	+ ·0013	−·0005	− 7 46 51·74	+ ·02	1·304	− ·420	− ·002	23 : 24	7·87 : 7·86	1598
336	3·0	1 Canis Majoris ζ	6 16 28·431	− ·004	+ 2·3027	+ ·0019	+·0006	−30 1 7·93	− ·01	− 1·439	− ·334	+ ·001	31 : 32	6·99 : 6·96	1601
337	3·0	13 Geminorum μ	16 54·655	− ·031	3·6306	− ·0007	+·0044	+22 33 53·20	+ ·78	1·591	·528	− ·113	21 : 22	6·97 : 6·91	1604
338	1·8	2 Canis Majoris β	18 17·711	+ ·004	2·6414	+ ·0016	−·0005	−17 54 22·68	·00	1·599	·383	·000	31 : 33	8·66 : 8·60	1609
339	4·5	8 Monocerotis	18 28·126	+ ·006	3·1797	·0006	−·0008	+ 4 38 37·45	+ ·02	1·617	·461	− ·003	28	7·06	1611
340*	−0·9	Argûs α	21 43·923	− ·013	1·3313	·0009	+·0017	−52 38 27·05	− ·08	1·888	·192	+ ·010	22	7·76	1622
341	5·1	10 Monocerotis	6 23 1·265	+ ·001	+ 2·9628	+ ·0009	−·0002	− 4 42 1·22	− ·10	− 1·996	− ·429	+ ·014	36 : 37	7·18 : 7·22	1634
342	4·1	18 Geminorum ν	23 1·507	+ ·005	3·5630	− ·0011	−·0006	+20 16 31·88	+ ·17	2·032	·516	− ·021	16 : 17	8·05 : 8·04	1635
343	4·5	Canis Majoris λ	24 27·690	+ ·015	+ 2·2230	+ ·0018	−·0022	−32 31 1·18	− ·11	2·120	− ·321	+ ·016	27	6·92	1641
344	5·5	Doradûs π^2	26 19·818	+ ·034	− 0·5089	− ·0083	−·0050	−69 37 57·54	− 1·32	2·101	+ ·076	+ ·197	29	6·70	1648
345	4·8	13 Monocerotis	27 29·776	− ·002	+ 3·2450	− ·0003	+·0002	+ 7 24 22·46	+ ·08	2·409	− ·469	− ·010	28	7·90	1657
346	5·8	Lacaille 2349	6 28 58·221	− ·058	+ 1·3986	+ ·0007	+·0084	−51 45 20·24	− ·64	− 2·435	− ·202	+ ·092	34	6·96	1671
347	4·6	5 Canis Majoris ξ^2	30 51·882	− ·003	2·5137	+ ·0015	+·0004	−22 53 7·69	− ·09	2·678	·362	+ ·013	40 : 41	7·18 : 7·20	1682
348	1·8	24 Geminorum γ	31 56·115	− ·022	3·4671	− ·0017	+·0031	+16 29 4·61	+ ·33	2·831	·500	− ·047	27	6·99	1690
349	4·4	Carinæ N	32 46·312	+ ·012	1·3220	·0000	−·0016	−52 53 37·89	+ ·07	2·866	·189	− ·009	23	7·30	1696
350	3·1	Argûs ν	34 42·089	− ·001	1·8358	+ ·0012	+·0001	−43 6 29·47	+ ·14	3·044	·263	− ·020	35 : 36	7·02 : 7·06	1702

311. L, 0·6–1·1; P, irregular.
325. Lacaille's R.A. is 1h too small. The fictitious μ Doradûs.
331. L, 3·2–4·2; P, 233.
331. Var. 8·8; close binary.
340. Magnitude from *Harvard Annals*, vol. I.

No.	Mag.	Name.	Mean R.A. 1900·0.	$\mu_\alpha \Delta E$.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	Mean Dec. 1900·0.	$\mu_\delta \Delta E$.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	No. of Obs.	Epoch 1900+.	Boss No.
			h m s	s	s	s	s	° ′ ″	″	″	″	″			
351†	5·2	15 Monocerotis......seq.	6 35 28·249	− ·001	+ 3·3051	− ·0012	+·0002	+ 9 59 17·60	+ ·05	− 3·097	− ·475	− ·007	32 : 35	7·16 : 7·24	1706
352	3·1	27 Geminorum ....ε	37 46·767	·000	3·6936	− ·0038	·0000	+25 13 48·93	+ ·14	3·310	·530	− ·020	30	6·99	1717
353	6·9	Brisbane 1331.......	38 4·203	+ ·007	1·6317	+ ·0007	−·0009	−47 31 35·17	− ·08	3·304	·233	+ ·011	32 : 34	7·28 : 7·20	1719
354	3·3	31 Geminorum ....ξ	39 40·556	+ ·055	3·3686	− ·0022	−·0078	+13 0 11·51	+ 1·42	3·654	·481	− ·201	23 : 26	7·10 : 7·05	1725
355*	−2·0	9 Canis Majoris.......α	40 44·167	+ ·257	2·6441	− ·0008	−·0366	−16 34 51·93	+ 8·43	4·751	·372	−1·206	38 : 39	7·03 : 6·99	1732
356	4·8	18 Monocerotis	6 42 38·767	+ ·003	+ 3·1298	− ·0008	−·0004	+ 2 31 17·99	+ ·17	− 3·734	− ·447	− ·025	42 : 44	6·94 : 6·93	1740
357	3·8	13 Canis Majoris ......κ	46 6·286	+ ·006	2·2407	+ ·0014	−·0008	−32 23 34·58	− ·01	4·005	·318	+ ·001	34 : 35	7·05	1761
358	3·6	34 Geminorum ....θ	46 11·861	− ·003	3·9588	− ·0075	+·0005	+34 4 54·65	+ ·37	4·068	·564	− ·054	24 : 25	6·94 : 6·85	1763
359	3·2	Pictoris ....α	47 9·787	+ ·082	0·6176	− ·0050	−·0114	−61 49 59·84	− 1·86	3·837	·085	+ ·260	21 : 22	7·23 : 7·15	1769
360	2·7	Argûs......... ......τ	47 27·278	− ·021	1·4886	− ·0006	+·0026	−50 29 43·58	+ ·68	4·207	·211	− ·086	22 : 23	7·95 : 7·88	1772
361	4·3	14 Canis Majoris.......θ	6 49 32·557	+ ·068	+ 2·7876	+ ·0003	−·0093	−11 54 48·12	+ ·11	− 4·315	− ·394	− ·015	44 : 49	7·28 : 7·19	1783
362	6·2	Lacaille 2530.........	51 17·762	− ·008	+ 1·8903	+ ·0010	+·0012	−42 14 19·58	− ·12	4·433	− ·267	+ ·017	29	7·06	1790
363	4·4	20 Canis Majoris.......ι	51 40·602	+ ·001	+ 2·6759	+ ·0007	−·0001	−16 55 28·78	− ·09	4·471	− ·378	+ ·011	22 : 23	7·94 : 7·92	1793
364	5·6	Volantis..............ι	52 35·655	+ ·012	− 0·6747	− ·0272	−·0017	−70 50 19·52	− ·20	4·532	+ ·098	+ ·028	29 : 30	7·18 : 7·12	1795
365	5·8	Piazzi VI. 303.........	54 29·989	+ ·009	+ 2·4577	+ ·0012	−·0013	−25 16 42·07	− ·10	4·708	− ·346	+ ·014	36 : 37	7·05 : 7·08	1802
366	1·5	21 Canis Majoris.......ε	6 54 41·720	− ·001	+ 2·3575	+ ·0013	+·0001	−28 50 9·22	+ ·01	− 4·740	− ·332	− ·001	29	6·88	1804
367	6·1	Piazzi VI. 305.........	57 9·210	− ·095	3·8173	− ·0091	+·0121	+29 30 11·36	+ 6·49	5·771	·539	− ·823	22	7·88	1809
368	3·8	22 Canis Majoris.........	57 44·088	+ ·006	2·3894	+ ·0012	−·0008	−27 47 29·74	− ·01	4·996	·335	+ ·001	25	7·97	1810
369	var.	43 Geminorum .... ζ	58 10·681	+ ·002	3·5613	− ·0053	−·0003	+20 43 1·57	+ ·05	5·042	·500	− ·008	31 : 33	6·53 : 6·44	1815
370	3·0	24 Canis Majoris......o^2	58 50·909	+ ·004	2·5048	+ ·0010	−·0005	−23 41 13·65	+ ·05	5·097	·351	− ·006	18	8·12	1817
371	4·1	23 Canis Majoris......γ	6 59 14·041	+ ·001	+ 2·7143	+ ·0004	−·0001	−15 29 7·51	+ ·10	− 5·138	− ·380	− ·014	34 : 36	7·59 : 7·45	1819
372	5·4	Lacaille 2642.........	7 2 26·456	+ ·011	1·1189	− ·0040	−·0015	−56 35 51·99	− ·01	5·392	·155	+ ·002	32 : 35	7·01 : 6·90	1833
373†	5·7	45 Geminorum.......pr.	2 37·948	+ ·005	3·4428	− ·0047	−·0007	+16 5 24·72	+ ·86	5·522	·481	− ·111	18	7·74	1835
374	7·1	Lacaille 2631.........	2 47·204	+ ·023	+ 1·9036	+ ·0007	−·0032	−42 10 25·62	− ·06	5·415	− ·264	+ ·009	22 : 23	7·27 : 7·21	1836
375	5·6	Mensæ ....θ	2 53·902	+ ·048	− 3·7266	− ·1452	−·0058	−79 16 35·96	+ ·02	5·436	+ ·525	− ·003	44	8·23	1837
376	1·8	25 Canis Majoris.......δ	7 4 19·505	+ ·003	+ 2·4391	+ ·0011	−·0004	−26 14 3·85	− ·01	− 5·551	− ·339	+ ·002	27 : 28	7·13 : 7·17	1839
377	6·1	Lacaille 2651.........	4 49·459	+ ·024	1·4375	− ·0014	−·0033	−51 48 40·17	− ·38	5·542	·198	+ ·053	32 : 33	7·23 : 7·17	1842
378	4·2	22 Monocerotis...........	6 45·454	− ·002	3·0652	− ·0016	+·0002	− 0 19 37·67	− ·09	5·746	·426	+ ·011	26 : 27	7·98	1853
379	5·3	51 Geminorum...........	7 37·746	− ·007	+ 3·4478	− ·0051	+·0008	+16 19 43·04	+ ·44	5·880	− ·478	− ·050	24 : 26	8·63 : 8·79	1856
380	3·8	Volantis ....γ^2	9 35·790	− ·040	− 0·4916	− ·0323	+·0050	−70 20 10·36	− ·74	5·901	+ ·070	+ ·094	21 : 22	7·90 : 7·88	1867
381	4·5	Puppis I	7 9 42·434	+ ·098	+ 1·7100	·0000	−·0143	−46 35 30·97	− ·61	− 5·915	− ·233	+ ·089	34 : 36	6·88 : 6·80	1869
382	3·5	54 Geminorum ....λ	12 20·759	+ ·023	3·4507	− ·0057	−·0033	+16 43 14·98	+ ·33	6·272	·475	− ·048	36 : 35	7·03 : 6·95	188[illegible]
383	2·5	Argûs ....π	13 36·649	+ ·005	2·1189	+ ·0011	−·0007	−36 55 3·87	+ ·01	6·331	·290	− ·002	30 : 31	7·14 : 7·07	1890
384†	3·4	55 Geminorum....seq. δ	14 9·042	+ ·009	3·5873	− ·0074	−·0013	+22 9 59·51	+ ·12	6·390	·493	− ·017	24 : 25	7·27 : 7·22	1898
385	5·0	29 Canis Majoris.........	14 30·513	+ ·007	+ 2·4975	+ ·0008	−·0010	−24 22 34·37	+ ·06	6·411	− ·342	− ·008	21 : 22	7·08 : 7·07	1899
386	3·9	Volantis..............δ	7 16 52·812	+ ·025	− 0·0195	− ·0253	−·0035	−67 46 26·70	+ ·04	− 6·605	+ ·006	− ·006	30	7·09	1917
387	3·9	60 Geminorum..........ι	19 30·915	+ ·061	+ 3·7319	− ·0104	−·0086	+27 59 48·41	+ ·63	6·907	− ·508	− ·090	25 : 26	7·06 : 6·96	1931
388	2·3	31 Canis Majoris.......η	20 8·338	+ ·005	+ 2·3726	+ ·0011	−·0007	−29 6 29·03	− ·03	6·864	− ·322	+ ·004	22	7·61	1934
389	2·9	3 Canis Minoris......β	21 43·647	+ ·026	+ 3·2559	− ·0043	−·0034	+ 8 29 26·96	+ ·33	7·041	− ·441	− ·043	26 : 30	7·79 : 7·73	1944
390	6·7	Lacaille 3274.........	22 1·70	− ·03	−19·815	− 2·648	+·003	−86 52 11·36	− ·06	7·015	+2·709	+ ·007	47 : 150	11·31 : 8·70	1947
391	4·3	62 Geminorum ....ρ	7 22 40·866	− ·093	+ 3·8649	− ·0124	+·0117	+31 59 1·36	− 1·46	− 6·893	− ·526	+ ·183	20	7·97	1952
392	5·2	Lacaille 2829.........	23 47·909	+ ·004	1·5405	− ·0018	−·0006	−50 48 59·86	+ ·02	7·171	·207	− ·003	32 : 35	7·18 : 7·10	1960
393	4·9	6 Canis Minoris.........	24 13·819	− ·002	3·3425	− ·0054	+·0002	+12 12 48·20	+ ·15	7·222	·452	− ·019	19 : 21	7·85 : 7·84	1962
394	2·9	Argûs.................σ	26 3·442	+ ·046	1·9031	+ ·0008	−·0058	−43 5 54·50	− 1·43	7·172	·254	+ ·180	27	7·97	1972
395	4·2	69 Geminorum..... ....υ	29 45·611	+ ·015	3·7029	− ·0114	−·0020	+27 7 4·63	+ ·89	7·768	·495	− ·116	21	7·71	1987
396	4·6	Lalande 14810........	7 29 46·281	+ ·034	+ 2·5665	+ ·0006	−·0048	−22 4 47·96	− ·32	− 7·608	− ·342	+ ·045	41 : 42	7·07 : 7·04	1988
397	5·2	25 Monocerotis...........	32 18·330	+ ·037	2·9841	− ·0020	−·0047	− 3 53 15·67	− ·14	7·840	·396	+ ·018	55 : 67	7·78	1999
398	5·1	71 Geminorum ....o	32 38·266	+ ·017	3·9246	− ·0161	−·0022	+34 48 49·11	+ ·96	8·006	·522	− ·122	17	7·90	2001
399	4·9	Carinæ...............Q	33 11·309	− ·010	1·4850	− ·0028	+·0014	−52 18 37·99	+ ·14	7·949	·196	− ·021	23 : 24	6·95 : 6·87	2003
400	4·7	Puppis...............f	33 40·023	+ ·022	2·2189	+ ·0012	−·0029	−34 44 36·67	− ·10	7·953	·293	+ ·014	20 : 21	7·46 : 7·36	2004

351. 5·2, 8·0 2″·9 217° 1902·7.
355. Reduction to C.G. +0^s·150, −0″·30.
369. L, 3·2–4·5 ; P, 10^d·15.
373. 5·7, 11·4 4″·1 39° 1903·8.
384. 3·4 , 8·4 7″·0 208° 1904·5.

No.	Mag.	Name.	Mean R.A. 1900·0.	$\mu_\alpha\Delta E$.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	Mean Dec. 1900·0.	$\mu_\delta\Delta E$.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	No. of Obs.	Epoch 1900+.	Boss No.
			h m s	s	s	s	s	° ′ ″	″	″	″	″			
401*	0·2	10 Canis Minoris ...... α	7 34 3·724	+ ·325	+ 3·1433	− ·0055	−·0466	+ 5 28 44·79	+ 7·20	− 9·029	− ·409	−1·030	24 : 26	6·98 : 6·99	2008
402	4·1	26 Monocerotis	36 28·129	+ ·043	2·8671	·0013	−·0051	− 9 19 4·39	+ ·20	8·215	·377	− ·024	33 : 35	8·46 : 8·53	2021
403†	3·5	77 Geminorum.... seq. κ	38 24·656	+ ·012	3·6280	·0111	−·0016	+24 38 16·14	+ ·46	8·408	·477	− ·062	18 : 20	7·61 : 7·41	2029
404	1·1	78 Geminorum........ β	39 11·442	+ ·381	3·6776	− ·0128	−·0471	+28 16 3·89	+ ·47	8·466	·477	− ·058	17	8·09	2031
405	4·1	3 Puppis.............. l	39 47·560	+ ·002	2·4083	+ ·0011	−·0002	−28 42 56·48	+ ·08	8·466	·314	− ·010	16 : 17	8·62 : 8·48	2035
406	5·1	Lacaille 2945	7 40 17·706	− ·085	+ 2·0427	+ ·0005	+·0112	−40 41 22·81	+ 1·43	− 8·685	− ·268	− ·189	19	7·58	2039
407	5·4	80 Geminorum........ π	41 3·543	− ·002	3·8775	− ·0165	+·0003	+33 39 40·35	+ ·28	8·596	·507	− ·040	22 : 23	7·21 : 7·12	2049
408	5·2	4 Puppis.................	41 20·562	+ ·009	+ 2·7628	·0004	−·0012	−14 19 14·57	− ·02	8·576	− ·360	+ ·003	22	7·87	2051
409	8·4*	Gilliss P.Z. 5752	41 31·05	...	−86·829	−54·772	...	−89 13 49·78	...	8·592	+11·443	...	13 : 16	11·39 : 11·41	...
410	3·2	Puppis................ c	41 41·499	+ ·015	+ 2·1365	+ ·0011	−·0021	−37 43 32·86	+ ·06	8·614	− ·277	− ·008	18 : 20	7·02 : 6·90	2052
411	3·8	Volantis............ ζ	7 43 3·171	− ·014	− 0·7121	− ·0614	+·0020	−72 21 56·86	− ·01	− 8·711	+ ·097	+ ·002	26 : 29	7·04 : 7·02	2056
412†	3·4	7 Argus .... seq. ξ	45 5·299	+ ·004	+ 2·5229	+ ·0008	−·0005	−24 36 31·57	− ·01	8·872	− ·326	+ ·001	38 : 43	7·02 : 6·96	2065
413	4·2	Puppis.............. P	46 11·463	+ ·008	1·8280	− ·0001	−·0011	−46 7 16·59	+ ·06	8·969	·234	− ·009	27 : 28	7·08 : 7·00	2070
414†	5·5	9 Puppis .... m...	47 8·417	+ ·034	2·7789	·0010	−·0041	−13 38 0·70	+ 2·88	9·373	·357	− ·339	20 : 23	8·31 : 8·50	2075
415	5·1	83 Geminorum........ φ	47 22·635	+ ·018	3·6784	− ·0133	−·0022	+27 1 28·36	+ ·30	9·090	·474	− ·037	17	8·16	2078
416	3·6	Puppis .... a	7 48 46·750	+ ·011	+ 2·0620	+ ·0009	−·0016	−40 19 4·19	+ ·05	− 9·170	− ·263	− ·008	22 : 23	6·70 : 6·64	2087
417	5·9	Lacaille 3083.........	49 1·184	...	0·4113	− ·0247	...	−65 56 24·64	...	9·180	·049	...	21	7·24	...
418*	4·3	Lacaille 3068.........	50 21·861	+ ·001	1·7639	·0007	−·0002	−47 50 31·27	+ ·13	9·303	·224	− ·018	31 : 33	7·42 : 7·31	2095
419	6·1	1 Cancri..................	51 18·792	+ ·015	+ 3·4106	·0086	−·0019	+16 3 26·47	+ ·39	9·407	− ·436	− ·049	27 : 29	8·00	2098
420	8·1	Octantis............ A	53 2·01	+ ·49	−44·246	16·886	−·043	−88 34 24·36	− ·09	9·481	+5·690	+ ·009	46 : 98	11·40 : 9·49	2102
421	3·5	Argus............... χ	7 54 14·108	+ ·027	+ 1·5270	− ·0030	−·0037	−52 42 50·24	− ·12	− 9·567	− ·191	+ ·017	39 : 43	7·31 : 7·24	2111
422	6·2	2 Cancri............... ω	54 52·855	− ·008	3·6366	·0133	+·0010	+25 39 59·83	+ ·01	9·634	·461	− ·001	19 : 20	7·87 : 7·85	2117
423	5·9	3 Cancri	55 3·474	+ ·001	3·4435	·0094	−·0001	+17 34 58·00	+ ·12	9·662	·436	− ·015	19	7·95	2118
424	5·2	Geminorum .... χ	7 57 22·609	+ ·011	3·6922	− ·0150	−·0015	+28 4 29·21	+ ·37	9·876	·465	− ·052	45 : 49	7·25 : 7·18	2131
425	2·0	Argûs................ ζ	8 0 4·164	+ ·022	2·1079	+ ·0013	−·0030	−39 43 16·61	− ·05	10·022	·261	+ ·007	47 : 51	7·33 : 7·21	2141
426	5·5	10 Cancri............... μ	8 1 52·814	− ·014	+ 3·5365	− ·0120	+·0018	+21 52 19·25	+ ·64	−10·247	− ·440	− ·081	24 : 26	7·85 : 7·86	2146
427	8·5	Brisbane 2007	3 3·02	...	−12·040	− 1·773	..	−85 39 16·05	...	10·254	+1·513	...	41 : 48	11·37 : 10·87	...
428*	2·8	15 Argûs................ ρ	3 17·060	+ ·050	+ 2·5545	+ ·0010	−·0065	−24 0 57·05	− ·34	10·226	− ·314	+ ·045	43 : 53	7·63 : 7·59	2153
429	6·1	14 Cancri............... ψ	4 25·782	+ ·041	3·6207	− ·0147	−·0051	+25 48 36·62	+ 2·84	10·711	·447	− ·354	26	8·03	2157
430	1·6	Argûs ... . γ	6 27·024	+ ·003	1·8496	·0000	−·0004	−47 2 30·34	+ ·02	10·511	·225	− ·003	36 : 39	7·14 : 7·07	2167
431	5·2	20 Puppis..	8 8 44·170	+ ·007	+ 2·7580	− ·0004	−·0009	−15 29 12·63	+ ·05	−10·685	− ·336	− ·007	62 : 68	7·84 : 7·73	2183
432	3·7	17 Cancri............... β	11 5·532	+ ·026	3·2568	·0072	−·0035	+ 9 29 37·41	+ ·41	10·906	·394	− ·054	54 : 60	7·49 : 7·53	2195
433	5·3	18 Cancri............... χ	13 59·424	+ ·007	3·6525	− ·0167	−·0009	+27 32 26·74	+ 3·06	11·452	·439	− ·388	28	7·89	2202
434	4·5	Puppis............... q	14 48·682	+ ·066	2·2445	+ ·0020	−·0096	−36 20 56·85	− ·59	11·039	·266	+ ·085	33 : 35	6·88 : 6·99	2207
435	6·1	20 Cancri.............. d^1	17 38·294	+ ·030	3·4406	− ·0114	−·0039	+18 39 11·82	+ ·25	11·361	·408	− ·032	24 : 25	7·76	2218
436	1·4	Argûs .... ε	8 20 27·651	+ ·030	+ 1·2356	− ·0091	−·0038	−59 11 15·39	− ·11	−11·518	− ·142	+ ·014	23 : 24	7·92 : 7·97	2233
437	3·9	Bradley 1197.........	20 39·812	+ ·034	2·9996	·0033	−·0044	− 3 34 48·92	+ ·19	11·571	·352	− ·025	16 : 20	7·65 : 7·43	2237
438	6·2	29 Cancri	23 2·558	+ ·007	+ 3·3527	·0098	−·0009	+14 32 31·07	+ ·14	11·733	− ·392	− ·018	25 : 26	7·87 : 7·90	2253
439	4·2	Chamæleontis ...... θ	23 38·45	+ ·51	− 1·7221	·1648	−·0447	−77 9 43·74	− ·20	11·736	+ ·214	+ ·022	32 : 78	11·33 : 9·03	2255
440	3·5	Volantis... .... β	24 38·953	+ ·048	+ 0·6644	·0266	−·0067	−65 48 11·85	+ 1·18	11·995	− ·072	− ·166	24 : 26	7·20 : 7·08	2258
441	7·0	Lacaille 3353.........	8 25 22·620	+ ·017	+ 2·0921	+ ·0019	−·0023	−42 15 15·43	− ·04	−11·874	− ·241	+ ·006	24 : 25	7·26 : 7·35	2262
442	5·8	31 Cancri .... θ	25 53·641	+ ·029	3·4268	− ·0119	−·0037	+18 25 56·57	+ ·54	11·986	·396	− ·069	18	7·89	2265
443	6·3	Lacaille 3368.........	26 29·655	+ ·029	1·9577	+ ·0011	−·0041	−45 59 48·25	+ ·11	11·974	·223	− ·015	23 : 26	7·06 : 7·01	2270
444	5·7	33 Cancri............... η	26 55·576	+ ·020	3·4762	− ·0132	−·0026	+20 46 51·23	+ ·40	12·044	·401	− ·054	32 : 30	7·52 : 7·42	2271
445	4·2	4 Hydræ .... δ	32 21·730	+ ·041	3·1790	− ·0066	−·0049	+ 6 3 8·64	+ ·10	12·378	·359	− ·011	33 : 39	8·45 : 8·73	2295
446	6·1	Lacaille 3443.........	8 32 52·883	+ ·006	+ 1·7923	− ·0002	−·0008	−50 37 21·18	+ ·08	−12·414	− ·200	− ·011	26 : 28	6·93 : 7·04	2297
447	4·6	5 Hydræ............... σ	33 31·857	+ ·010	3·1388	− ·0058	−·0012	+ 3 41 32·89	+ ·16	12·467	·353	− ·020	16	7·94	2302
448	4·1	Velorum c	34 7·659	+ ·010	2·1084	+ ·0023	−·0013	−42 38 20·84	+ ·04	12·494	·235	− ·006	22	7·41	2307
449	5·3	6 Hydræ..................	35 17·150	+ ·047	2·8428	− ·0010	−·0059	−12 7 18·61	+ ·03	12·571	·317	− ·004	28 : 29	8·05 : 8·06	2315
450	3·9	Pyxidis .... β	36 11·285	− ·003	2·3472	+ ·0027	+·0004	−34 57 12·06	+ ·13	12·648	·260	− ·019	29 : 28	6·95 : 6·94	2318

401. Reduction to C.G., $+0^s·017$, $+1''·22$.
403. 3·5, 8·0 6″·6 236 1903·3.
412. 3·4, 13·7 5″·4 224 1898·3.
414. 6·0, 6·6; very close binary.
418. J Puppis in Uranometria Argentina.
428. 15 Navis ι in Auwers' Bradley.

No.	Mag.	Name.	Mean R.A. 1900·0.	$\mu_\alpha\Delta$E.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	Mean Dec. 1900·0.	$\mu_\delta\Delta$E.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	No. of Obs.	Epoch 1900+.	Boss No.
			h m s	s	s	s	s	° ′ ″	″	″	″	″			
451	3·6	Velorum .... b	8 37 18·459	+ ·006	+ 1·9901	+ ·0018	− ·0007	−46 17 34·26	+ ·11	−12·718	− ·219	− ·013	20	8·09	2324
452	4·7	43 Cancri............... γ	37 29·928	+ ·057	3·4788	− ·0143	− ·0073	+21 49 41·26	+ ·39	12·768	·386	− ·050	17	7·81	2327
453	4·4	Carinæ............. d	38 24·438	+ ·022	1·3277	− ·0082	− ·0032	−59 24 14·61	+ ·04	12·785	·143	− ·006	27	7·02	2331
454	4·1	47 Cancri.............. δ	39 0·184	+ ·008	+ 3·4154	− ·0128	− ·0012	+18 31 17·71	+ 1·63	13·058	− ·377	− ·239	23 : 24	6·99 : 6·83	2336
455	7·0	Lacaille 3759.........	39 26·91	...	−12·466	− 2·640	...	−86 13 22·21	...	12·849	+1·401	...	52 : 63	11·37 : 10·67	...
456	3·6	Pyxidis.............. α	8 39 34·409	+ ·007	+ 2·4100	+ ·0028	− ·0009	−32 49 33·07	− ·05	−12·851	− ·264	+ ·006	23	7·75	2342
457	5·2	Velorum ....D	40 32·495	− ·012	1·8793	+ ·0010	+ ·0016	−49 27 39·70	− ·04	12·917	·204	+ ·005	26 : 27	7·33 : 7·27	2347
458	4·2	48 Cancri.............. ι	40 38·814	+ ·011	3·6399	− ·0195	− ·0015	+29 7 32·67	+ ·36	12·979	·400	− ·050	16	7·26	2348
459†	3·4	11 Hydræ. AB......... ε	41 28·759	+ ·094	3·1808	− ·0071	− ·0127	+ 6 47 8·21	+ ·40	13·038	·346	− ·054	22 : 24	7·39 : 7·44	2354
460	3·9	Velorum............ a	42 38·217	+ ·011	2·0328	+ ·0023	− ·0015	−45 40 32·44	+ ·09	13·075	·219	− ·013	34 : 35	7·26 : 7·25	2358
461	5·3	14 Hydræ..................	8 44 20·212	+ ·012	+ 3·0169	− ·0036	− ·0014	− 3 4 19·23	+ ·22	−13·198	− ·326	− ·024	33 : 42	8·53 : 9·05	2365
462	5·7	Chamæleontis...... η	44 43·606	+ ·120	− 1·9313	− ·2217	− ·0151	−78 36 1·30	− ·26	13·167	+ ·219	+ ·033	46	7·92	2366
463	8·8*	Gilliss P.Z. 6020.....	45 26·22	...	−27·819	−11·600	...	−88 8 24·43	...	13·246	+3·050	...	11	11·38	...
464	4·2	Pyxidis .... γ	46 17·188	+ ·073	+ 2·5451	+ ·0025	− ·0103	−27 20 19·70	− ·57	13·221	− ·271	+ ·081	31	7·07	2375
465	6·2	55 Cancri .... ρ¹	46 38·224	+ ·290	3·5828	− ·0196	− ·0365	+28 42 44·45	+ 1·95	13·571	·381	− ·245	21	7·95	2380
466	6·8	Lacaille 3577..........	8 48 13·378	+ ·008	+ 2·2203	+ ·0034	− ·0012	−40 36 37·37	+ ·05	−13·435	− ·234	− ·007	30 : 31	6·96 : 6·94	2386
467	3·2	16 Hydræ.... .... ζ	50 6·440	+ ·050	3·1746	− ·0070	− ·0069	+ 6 19 34·13	− ·07	13·541	·335	+ ·009	28 : 33	7·18 : 7·66	2393
468	5·8	60 Cancri	50 27·977	+ ·002	3·2813	− ·0096	− ·0002	+12 0 29·33	+ ·17	13·595	·346	− ·021	18	8·11	2394
469	5·4	Lacaille 3596.........	50 29·273	+ ·012	2·0110	+ ·0025	− ·0016	−47 8 24·76	+ ·30	13·617	·210	− ·042	30 : 31	7·24 : 7·19	2395
470	3·9	Carinæ...... c	52 46·845	+ ·023	1·3634	− ·0077	− ·0034	−60 15 44·88	− ·39	13·665	·139	+ ·057	24 : 26	6·83 : 6·81	2406
471	4·4	65 Cancri.............. α	8 53 1·120	− ·017	+ 3·2861	− ·0098	+ ·0025	+12 14 41·44	+ ·27	−13·776	− ·343	− ·039	27 : 28	6·93 : 6·81	2407
472	5·3	Carinæ .... b¹	54 31·577	+ ·013	1·4708	− ·0054	− ·0016	−58 50 35·41	− ·02	13·831	·149	+ ·002	18	8·35	2414
473	5·6	69 Cancri.............. ν	8 56 53·557	·000	3·5158	− ·0172	·0000	+24 50 47·39	+ ·04	13·987	·361	− ·005	31 : 33	7·97 : 7·96	2426
474	3·5	Velorum............. c	9 0 42·268	+ ·047	2·0658	+ ·0035	− ·0068	−46 41 58·34	+ ·16	14·243	·206	− ·024	30	6·87	2438
475	5·5	18 Hydræ .... ω	0 42·530	+ ·011	3·1615	− ·0068	− ·0014	+ 5 29 31·09	+ ·02	14·222	·319	− ·003	19 : 20	7·79 : 7·77	2439
476	4·1	Volantis............ α	9 0 52·147	+ ·016	+ 0·9559	− ·0223	− ·0023	−65 59 49·21	+ ·71	−14·331	− ·092	− ·102	25 : 27	6·84 : 7·00	2440
477	5·3	76 Cancri............... κ	2 19·882	+ ·011	3·2541	− ·0094	− ·0013	+11 4 14·46	+ ·10	14·330	·326	− ·011	24 : 25	8·76 : 8·86	2445
478	5·3	77 Cancri .... ξ	3 36·635	− ·002	3·4569	− ·0159	+ ·0003	+22 27 0·16	+ ·06	14·404	·345	− ·007	20	8·03	2449
479	1·8	Argûs.............. λ	4 19·050	+ ·017	2·2046	+ ·0045	− ·0024	−43 1 43·46	− ·04	14·435	·217	+ ·005	31 : 32	7·00 : 7·06	2452
480	4·4	Carinæ ....G	4 53·043	+ ·038	0·1868	− ·0625	− ·0055	−72 12 1·01	+ ·05	14·482	·012	− ·008	25 : 26	6·87 : 6·82	2458
481	3·4	Carinæ.............. a	9 8 20·001	+ ·043	+ 1·5788	− ·0030	− ·0052	−58 33 25·94	+ ·04	−14·686	− ·150	− ·005	18	8·36	2473
482	4·0	22 Hydræ.............. θ	9 9·808	− ·073	+ 3·1244	·0060	+ ·0087	+ 2 44 7·67	+ 2·61	15·042	− ·304	− ·312	19 : 18	8·41 : 8·35	2479
483	5·5	Octantis............ ζ	11 13·48	+1·15	− 7·860	1·629	− ·101	−85 15 46·67	− ·30	14·820	+ ·786	+ ·033	66 : 189	11·39 : 8·82	2486
484	1·5	Argûs............... β	12 5·974	+ ·257	+ 0·6750	·0358	− ·0313	−69 18 18·10	− ·80	14·806	− ·056	+ ·098	21	8·21	2493
485	6·9	83 Cancri.....	13 24·019	+ ·056	3·3551	·0135	− ·0081	+18 7 44·84	+ ·95	15·117	·318	− ·138	24 : 28	6·88 : 6·87	2501
486	2·0	Argûs.............. ι	9 14 24·796	+ ·024	+ 1·6065	− ·0023	− ·0034	−58 51 20·19	+ ·01	−15·040	− ·148	− ·002	21 : 22	7·15 : 7·13	2503
487	5·4	Velorum ....K	14 46·173	+ ·029	1·9934	+ ·0040	− ·0038	−50 37 48·86	− ·04	15·054	·185	+ ·005	21 : 22	7·51 : 7·57	2504
488	3·3	40 Lyncis...................	14 57·742	+ ·133	3·6676	− ·0265	− ·0176	+34 48 56·10	− ·08	15·060	·344	+ ·010	21	7·54	2507
489	5·0	Pyxidis.... .... θ	17 3·930	+ ·011	2·6541	+ ·0035	− ·0015	−25 32 23·45	+ ·06	15·199	·246	− ·009	33 : 36	7·13 : 7·18	2516
490	2·4	Argûs .... κ	19 0·991	+ ·016	1·8558	+ ·0026	− ·0023	−54 35 0·53	+ ·03	15·306	·168	− ·005	29 : 30	6·93 : 6·88	2520
491	6·0	28 Hydræ...........	9 20 24·043	+ ·011	+ 3·0007	− ·0027	− ·0014	− 4 41 10·43	+ ·08	−15·389	− ·274	− ·010	26 : 28	7·99 : 8·02	2529
492	2·0	30 Hydræ .... α	22 40·418	+ ·008	2·9488	− ·0014	− ·0011	− 8 13 30·32	− ·24	15·475	·266	+ ·031	66 : 78	7·62 : 7·79	2533
493	4·6	Antliæ............... ε	25 7·030	+ ·016	2·4735	+ ·0059	− ·0022	−35 30 50·06	+ ·14	15·660	·219	− ·019	33 : 35	7·18 : 7·15	2544
494	5·2	5 Leonis................ ξ	26 33·355	+ ·056	3·2383	− ·0100	− ·0065	+11 44 33·02	+ ·77	15·806	·286	− ·087	27 : 33	8·60 : 8·81	2555
495†	3·5	Argûs.......... m. ψ	26 45·568	+ ·114	2·3599	+ ·0065	− ·0164	−40 1 43·36	− ·46	15·664	·205	+ ·066	24	6·95	2558
496	2·8	Velorum ....N	9 28 10·929	+ ·039	+ 1·8213	+ ·0027	− ·0048	−56 35 35·36	− ·03	−15·803	− ·156	+ ·004	21	8·14	2567
497	5·5	Lacaille 3900..........	28 21·054	− ·001	2·3783	·0068	+ ·0001	−40 12 24·70	+ ·14	15·835	·206	− ·019	23 : 25	7·24 : 7·17	2568
498	5·3	Lalande 18817........	28 36·155	+ ·014	2·7610	+ ·0028	− ·0019	−20 40 23·08	+ ·01	15·832	·240	− ·002	20	7·42	2569
499	5·9	33 Hydræ.............. A	29 33·271	·000	2·9943	− ·0023	·0000	− 5 28 7·60	+ ·47	15·937	·260	− ·057	20	8·19	2572
500	5·6	Carinæ............ H	30 51·356	+ ·050	0·4762	− ·0558	− ·0068	−72 38 14·37	+ ·07	15·960	·034	− ·010	24	7·30 : 7·26	2579

459. 3·9, 4·4. Very close binary ; C not seen.
495. 3·7, 5·7 0″·5 339° 1902·2.

No.	Mag.	Name.	Mean R. A. 1900·0.	$\mu_\alpha \Delta$E.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	Mean Dec. 1900·0.	$\mu_\delta \Delta$E.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	No. of Obs.	Epoch 1900+.	Boss No.
			h m s	s	s	s	s	° ′ ″	″	″	″	″			
501	4·1	Carinæ ....h	9 31 32·565	+ ·013	+ 1·7398	+ ·0014	− ·0018	−58 47 1·41	− ·08	−15·975	− ·146	+ ·011	22	7·20	2581
502	5·4	1 Sextantis	31 55·911	+ ·036	3·1708	− ·0077	− ·0044	+ 7 17 2·82	+ ·06	16·013	·271	− ·007	21	8·08	2582
503	4·9	2 Sextantis........... ...	33 14·265	+ ·092	3·1326	− ·0066	− ·0110	+ 5 6 2·93	+ ·52	16·138	·265	− ·063	16 : 18	8·37 : 8·23	2589
504	4·4	Velorum ....M	33 14·726	+ ·090	2·1443	+ ·0069	− ·0125	−48 54 24·09	− ·17	16·053	·179	+ ·023	24	7·23	2590
505	5·6	Velorum............y	34 7·066	− ·018	2·3407	+ ·0075	+ ·0024	−42 44 22·13	+ ·32	16·165	·196	− ·044	22	7·37	2594
506	4·1	35 Hydræ ....ι	9 34 44·980	− ·026	+ 3·0659	− ·0041	+ ·0031	− 0 41 20·39	+ ·60	−16·226	− ·258	− ·072	15	8·32	2595
507	5·1	38 Hydræ ....κ	35 30·708	+ ·014	2·8759	+ ·0009	− ·0018	−13 52 43·26	+ ·13	16·209	·240	− ·016	20 : 22	7·97	2600
508	3·7	14 Leonis ....o	35 48·807	+ ·067	+ 3·2061	− ·0092	− ·0098	+10 20 50·07	+ ·27	16·248	− ·267	− ·039	29 : 32	6·82 : 6·87	2602
509	5·3	Chamæleontis ..... ζ	36 50	...	− 1·6117	− ·2984	− ·0173	−80 29 30·06	− ·05	16·254	+ ·146	+ ·007	3	7·28	2606
510	5·8	16 Leonis ....ψ	38 17·210	+ ·002	+ 3·2722	− ·0115	− ·0002	+14 28 45·42	+ ·11	16·349	− ·270	− ·014	27 : 29	8·07 : 8·09	2612
511	5·1	Antliæ...............θ	9 39 44·589	+ ·031	+ 2·6714	+ ·0052	− ·0045	−27 18 41·82	− ·16	−16·385	− ·216	+ ·023	27	6·96	2615
512	3·1	17 Leonis...............ε	40 10·549	+ ·022	3·4140	− ·0179	− ·0030	+24 14 5·13	+ ·18	16·454	·278	− ·024	24 : 27	7·37 : 7·44	2618
513	var.	Carinæ...............l	42 29·972	+ ·024	1·6472	− ·0002	− ·0032	−62 2 47·67	− ·16	16·525	·128	+ ·021	21 : 22	7·52 : 7·59	2628
514	6·0	Lacaille 4022.........	42 36·379	+ ·007	2·3357	+ ·0086	− ·0010	−44 17 33·55	·00	16·551	·185	·000	33 : 35	7·25 : 7·29	2629
515	6·9	23 Leonis.................:	45 37·358	− ·014	3·2520	− ·0109	+ ·0017	+13 32 1·79	+ ·22	16·725	·255	− ·027	23	8·05	2639
516	6·2	6 Sextantis...............	9 46 11·709	− ·007	+ 3·0246	− ·0025	+ ·0009	− 3 46 29·32	+ ·22	−16·756	− ·236	− ·030	32 : 31	7·34 : 7·24	2641
517	4·1	24 Leonis ....μ	47 4·544	+ ·116	3·4208	− ·0196	− ·0163	+26 28 40·55	+ ·45	16·832	·265	− ·063	19	7·12	2648
518	4·5	Velorum ....m	47 48·884	+ ·020	2·3129	+ ·0093	− ·0027	−46 4 42·78	+ ·20	16·831	·177	− ·027	25 : 26	7·54 : 7·47	2651
519	6·2	Bradley 1393	51 7·898	+ ·048	3·1843	− ·0085	− ·0061	+ 9 24 25·62	− ·06	16·953	·240	+ ·007	32 : 33	7·94	2663
520	5·5	27 Leonis...............ν	52 50·648	+ ·017	3·2318	− ·0105	− ·0021	+12 55 18·67	+ ·23	17·069	·241	− ·029	23	8·00	2672
521	3·5	Argûs...............φ	9 53 21·066	+ ·017	+ 2·1010	+ ·0094	− ·0025	−54 5 29·97	+ ·04	−17·069	− ·153	− ·006	23 : 24	6·86 : 6·83	2674
522	6·7	Lacaille 4092.........	53 52·378	+ ·018	2·2954	+ ·0103	− ·0024	−47 56 13·16	+ ·23	17·118	·168	− ·031	19 : 21	7·62 : 7·52	2676
523	5·3	Antliæ...............η	54 34·746	+ ·060	2·5703	+ ·0085	− ·0076	−35 24 44·43	+ ·21	17·146	·187	− ·027	19 : 20	7·84 : 7·82	2679
524	5·0	29 Leonis...............π	54 55·758	+ ·018	3·1740	− ·0080	− ·0023	+ 8 31 26·36	+ ·21	17·162	·233	− ·027	43 : 45	8·00 : 7·91	2680
525	6·1	Lacaille 4126.........	9 59 43·739	+ ·072	2·7668	+ ·0055	− ·0102	−23 48 5·38	− ·16	17·327	·194	+ ·022	34 : 36	7·02 : 7·05	2688
526	4·8	40 Hydræ.............ν^2	10 0 15·271	+ ·020	+ 2·9210	+ ·0015	− ·0025	−12 34 47·04	− ·09	−17·360	− ·205	+ ·012	24	7·90	2690
527	3·5	30 Leonis ....η	1 52·886	+ ·001	3·2768	− ·0129	− ·0001	+17 15 1·32	+ ·09	17·455	·228	− ·012	33 : 35	7·14 : 7·16	2694
528	1·2	32 Leonis......... .....α	3 2·728	+ ·122	+ 3·1996	− ·0100	− ·0169	+12 27 21·79	+ ·02	17·496	− ·219	− ·003	33 : 32	7·20	2698
529	5·7	Chamæleontis......μ	3 24	...	− 1·4240	− ·3466	− ·0173	−81 43 50·17	− ·22	17·478	+ ·110	+ ·030	13	7·32	2699
530	5·1	Velorum.............Q	5 8·726	+ ·007	+ 2·2693	+ ·0123	− ·0010	−51 19 14·31	+ ·04	17·587	− ·151	− ·005	27 : 29	7·21 : 7·23	2702
531	3·8	41 Hydræ ....λ	10 5 42·669	+ ·104	+ 2·9244	+ ·0014	− ·0137	−11 51 35·94	+ ·69	−17·699	− ·195	− ·093	44 : 43	7·59 : 7·46	2706
532	7·6	Lacaille 4342.........	8 41·42	+ ·55	− 6·964	− 2·338	− ·048	−86 25 32·30	− ·02	17·726	+ ·485	+ ·002	52 : 64	11·45 : 10·68	2715
533	3·9	Velorum.............q	10 32·155	+ ·111	+ 2·5124	+ ·0118	− ·0140	−41 37 34·77	− ·24	17·773	− ·160	+ ·031	23	7·90	2723
534	3·4	36 Leonis.................ζ	11 7·781	− ·014	3·3450	− ·0174	+ ·0016	+23 54 56·50	+ ·13	17·842	·216	− ·015	16 : 17	8·87 : 8·90	2730
535	3·4	Argûs...... ....ω	11 21·549	+ ·047	1·4318	− ·0076	− ·0053	−69 32 28·67	+ ·02	17·838	·087	− ·002	16 : 17	8·87 : 8·83	2733
536	5·5	22 Sextantis.	10 12 39·580	+ ·089	+ 2·9814	·0000	− ·0108	− 7 34 10·17	− ·02	−17·886	− ·188	+ ·002	17 : 19	8·20 : 8·21	2735
537	3·3	Carinæ.............. q	13 44·564	+ ·052	1·9954	+ ·0114	− ·0061	−60 49 57·33	+ ·06	17·937	·122	− ·007	21	8·49	2739
538	5·7	Lacaille 4260.........	16 12·004	− ·006	2·4418	+ ·0141	+ ·0009	−47 11 46·67	+ ·13	18·045	·148	− ·019	27 : 30	7·09 : 7·06	2749
539	6·4	42 Leonis	16 27·682	+ ·022	3·2312	− ·0115	− ·0027	+15 28 47·04	+ ·24	18·066	·198	− ·030	20	8·10	2752
540	4·9	Velorum............ r	18 2·197	+ ·021	+ 2·5669	+ ·0129	− ·0029	−41 8 48·03	− ·37	18·042	− ·153	+ ·053	27 : 29	7·11 : 7·04	2758
541	7·5	C. G. A. 14444.......	10 18 47·51	...	−29·872	− 31·819	...	−89 0 24·06	...	−18·124	+1·869	...	39 : 49	11·45 : 10·62	...
542	5·6	Lacaille 4278..........	19 6·421	+ ·090	+ 2·6226	+ ·0116	− ·0127	−37 30 8·65	+ ·45	18·199	− ·154	− ·063	28	7·07	2763
543	4·0	42 Hydræ...............μ	21 15·160	+ ·068	2·8999	+ ·0040	− ·0089	−16 19 33·46	+ ·66	18·299	·168	− ·084	58 : 67	7·69 : 7·85	2771
544	4·0	Carinæ...............I	22 24·637	+ ·032	1·2017	− ·0224	− ·0043	−73 31 21·96	+ ·16	18·278	·064	− ·021	21	7·50	2778
545	4·4	Antliæ... ....α	22 34·483	+ ·039	2·7416	+ ·0097	− ·0053	−30 33 30·63	·00	18·263	·157	·000	20 : 24	7·27 : 7·22	2779
546	4·0	Carinæ ....s	10 24 12·394	+ ·014	+ 2·1944	+ ·0163	− ·0020	−58 13 43·43	+ ·06	−18·329	− ·122	− ·008	33	7·17	2784
547	5·3	29 Sextantis.............	24 23·974	+ ·026	3·0481	− ·0019	− ·0032	− 2 13 38·35	+ ·15	18·347	·172	− ·019	20 : 21	8·03	2788
548	3·8	47 Leonis...............ρ	27 32·778	+ ·004	3·1627	− ·0079	− ·0005	+ 9 49 16·28	+ ·04	18·444	·173	− ·006	39 : 41	7·03 : 6·96	2804
549	3·4	Carinæ...............p	28 27·995	+ ·024	+ 2·1247	+ ·0168	− ·0035	−61 10 15·03	− ·05	18·462	− ·112	+ ·007	25 : 26	6·97 : 7·05	2811
550	7·8	C. G. A. 14481.......	29 6·70	...	− 4·400	− 1·540	...	−86 2 52·31	...	18·491	+ ·256	...	46 : 62	11·42 : 10·45	...

513. L, 3·6–5·0; P, 35^{d}·5

No.	Mag.	Name.	Mean R.A. 1900·0.	$\mu_a \Delta E$.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	Mean Dec. 1900·0.	$\mu_\delta \Delta E$.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	No. of Obs.	Epoch 1900+.	Boss No.
			h m s	s	s	s	s	° ′ ″	″	″	″	″			
551	5·5	44 Hydræ	10 29 15·458	+ ·001	+ 2·8509	+ ·0075	− ·0002	−23 13 47·28	− ·06	−18·488	− ·152	+ ·008	23	7·28	2815
552	5·4	48 Leonis	29 34·989	+ ·059	3·1325	− ·0065	− ·0072	+ 7 28 7·26	− ·42	18·455	·167	+ ·052	25	8·16	2816
553	4·9	37 Leonis Minoris	33 5·628	− ·004	3·3880	− ·0240	+ ·0005	+32 29 44·87	+ ·02	18·626	·175	− ·003	19	7·81	2829
554†	4·0	Velorum *m. p*	33 5·788	+ ·116	2·5124	+ ·0170	− ·0162	−47 42 22·20	+ ·21	18·653	·127	− ·030	29	7·15	2830
555	4·0	Chamæleontis γ	34 17·132	+ ·116	0·7440	− ·0693	− ·0136	−78 5 20·94	− ·14	18·645	·031	+ ·016	34	8·56	2837
556	4·3	Velorum *x*	10 35 19·510	+ ·019	+ 2·3787	+ ·0196	− ·0023	−55 4 56·54	+ ·15	−18·713	− ·117	− ·019	19 : 20	8·07 : 7·96	2842
557	6·8	33 Sextantis	36 18·897	+ ·076	+ 3·0528	− ·0019	− ·0094	− 1 12 58·47	+ 1·04	18·854	− ·150	− ·129	16	8·08	2846
558	7·1	Lacaille 4510	36 55·38	+ ·05	− 3·053	− 1·078	− ·004	−85 34 20·89	+ ·12	18·758	+ ·165	− ·014	54 : 156	11·44 : 8·76	2849
559	6·9	34 Sextantis	37 27·636	+ ·056	+ 3·1000	− ·0045	− ·0062	+ 4 6 20·19	− ·19	18·740	− ·151	+ ·021	17 : 19	9·03 : 8·99	2851
560	5·1	41 Leonis Minoris	37 58·730	+ ·065	3·2697	− ·0164	− ·0083	+23 42 43·03	− ·04	18·772	·159	+ ·005	17	7·84	2854
561	2·8	Argûs θ	10 39 23·268	+ ·023	+ 2·1303	+ ·0202	− ·0033	−63 52 13·57	− ·06	−18·811	− ·099	+ ·009	18 : 19	7·10 : 7·08	2862
562	5·4	42 Leonis Minoris	40 18·316	+ ·014	3·3463	− ·0225	− ·0020	+31 12 32·65	+ ·28	18·888	·158	− ·041	21	6·81	2866
563	6·6	37 Sextantis	40 53·296	+ ·004	3·1266	− ·0058	− ·0005	+ 6 54 0·41	+ ·30	18·902	·146	− ·038	17	7·96	2868
564	var.	Argûs η	41 10·786	− ·004	2·3181	+ ·0220	+ ·0005	−59 9 31·45	− ·02	18·871	·106	+ ·002	12	8·86	2871
565†	2·6	Argûs *pr.* μ	42 28·123	− ·037	2·5692	+ ·0196	+ ·0052	−48 53 30·53	+ ·41	18·970	·116	− ·059	27 : 28	7·07 : 7·00	2875
566	5·5	53 Leonis *l*	10 44 0·090	+ ·001	+ 3·1574	− ·0080	− ·0001	+11 4 27·53	+ ·23	−18·988	− ·142	− ·033	25	7·11	2883
567	3·3	Hydræ ν	44 41·476	− ·048	2·9578	+ ·0054	+ ·0065	−15 40 11·84	− 1·38	18·781	·131	+ ·193	27 : 28	7·44 : 7·15	2888
568	4·6	Chamæleontis δ^2	44 50·91	+ ·21	+ 0·6097	− ·0980	− ·0183	−80 0 45·85	+ ·04	18·983	− ·020	− ·004	17 : 19	11·46 : 11·03	2889
569	7·6	Lacaille 4578	45 54·55	...	− 3·625	− 1·500	...	−86 22 21·91	...	19·008	+ ·176	...	34 : 51	11·41 : 10·08	...
570	3·9	46 Leonis Minoris	47 43·279	− ·054	+ 3·3674	− ·0258	+ ·0074	+34 45 12·74	+ 2·07	19·348	− ·144	− ·290	32 : 35	7·29 : 7·13	2899
571	3·8	Carinæ *u*	10 49 25·854	− ·060	+ 2·4237	+ ·0251	+ ·0078	−58 19 19·18	− ·17	−19·082	− ·099	+ ·022	30	7·75	2908
572	4·7	Antliæ ι	52 3·449	− ·054	2·7897	+ ·0156	+ ·0073	−36 36 1·30	+ 1·01	19·311	·111	− ·139	47 : 49	7·39 : 7·29	2919
573	4·2	7 Crateris α	54 53·852	+ ·265	2·9197	+ ·0067	− ·0326	−17 45 57·60	− ·98	19·123	·110	+ ·121	24	8·13	2925
574	5·1	58 Leonis *d*	55 23·805	− ·006	3·0999	− ·0037	+ ·0006	+ 4 9 15·69	+ ·20	19·277	·117	− ·021	45 : 54	9·25 : 9·48	2927
575	4·6	Velorum *i*	55 33·905	− ·015	2·7442	+ ·0186	+ ·0021	−41 41 21·93	+ ·05	19·267	·103	− ·007	27 : 28	7·28 : 7·26	2929
576	4·7	63 Leonis χ	10 59 51·373	+ ·192	+ 3·0970	− ·0055	− ·0233	+ 7 52 35·49	+ ·38	−19·407	− ·108	− ·047	19	8·25 : 8·11	2942
577	6·4	Octantis η	11 0 0·86	+ ·48	− 0·291	− ·330	− ·042	−84 3 21·48	+ ·12	19·378	+ ·021	− ·014	52 : 155	11·49 : 8·77	2944
578	5·2	Hydræ χ	0 30·670	+ ·125	+ 2·8841	+ ·0115	− ·0153	−26 45 13·69	+ ·11	19·388	− ·099	− ·013	15	8·20	2947
579†	5·8	65 Leonis *pr.* p^1	1 47·970	+ ·208	3·0619	− ·0026	− ·0251	+ 2 29 53·26	+ ·72	19·491	·103	− ·087	22 : 23	8·27 : 8·25	2950
580	5·9	Lacaille 4625	3 13·177	+ ·047	2·1488	+ ·0314	− ·0064	−70 20 13·01	+ ·10	19·449	·068	− ·014	28 : 31	7·31 : 7·20	2955
581	3·9	Carinæ *x*	11 4 18·991	+ ·018	+ 2·5466	+ ·0301	− ·0024	−58 25 59·91	+ ·02	−19·460	− ·081	− ·002	28 : 29	7·61 : 7·60	2960
582	4·6	11 Crateris β	6 44·337	− ·001	+ 2·9463	+ ·0099	+ ·0001	−22 16 48·35	+ ·68	19·609	− ·091	− ·101	36 : 34	7·10 : 6·72	2964
583	7·2	Lacaille 4708	7 35·57	...	− 0·541	− ·468	...	−85 12 25·13	..	19·525	+ ·026	...	44 : 69	11·48 : 9·96	...
584	5·8	Lacaille 4649	7 59·554	+ ·099	+ 2·7198	+ ·0247	− ·0120	−48 33 28·71	− ·20	19·509	− ·081	+ ·024	17	8·23	2965
585	5·6	Lacaille 4657	8 36·783	+ ·035	2·4690	+ ·0349	− ·0041	−63 37 33·37	+ ·05	19·551	·072	− ·006	17 : 18	8·56	2969
586	2·5	68 Leonis δ	11 8 47·541	− ·092	+ 3·1970	− ·0132	+ ·0106	+21 4 16·67	+ 1·26	−19·693	− ·095	− ·145	16	8·70	2972
587	3·3	70 Leonis θ	8 59·569	+ ·037	+ 3·1525	− ·0098	− ·0043	+15 58 33·50	+ ·73	19·638	− ·093	− ·086	16 : 17	8·57 : 8·46	2974
588	6·7	Lacaille 4731	10 29·42	...	− 0·727	− ·569	...	−85 41 14·92	...	19·581	+ ·031	...	37 : 57	11·51 : 10·01	...
589	5·7	73 Leonis *n*	10 38·050	+ ·005	+ 3·1422	− ·0084	− ·0006	+13 51 11·04	+ ·22	19·610	− ·090	− ·026	16 : 17	8·46 : 8·44	2978
590	4·6	74 Leonis φ	11 34·604	+ ·064	3·0496	+ ·0008	− ·0075	− 3 6 18·03	+ ·38	19·645	·085	− ·044	16	8·57	2982
591†	3·5	54 Ursæ Majoris *pr.* ν	11 13 4·695	+ ·014	+ 3·2513	− ·0225	− ·0018	+33 38 24·52	− ·12	−19·613	− ·088	+ ·015	18	7·99 : 7·81	2985
592	3·8	12 Crateris δ	14 20·361	+ ·075	2·9967	+ ·0065	− ·0085	−14 14 12·93	− 1·69	19·455	·078	+ ·195	16 : 17	8·79 : 8·66	2989
593	4·2	77 Leonis σ	15 58·774	+ ·051	3·0955	− ·0040	− ·0063	+ 6 34 38·28	+ ·12	19·693	·078	− ·015	22	8·17 : 8·02	2990
594	4·2	Centauri π	16 26·670	+ ·031	2·7216	+ ·0307	− ·0040	−53 56 35·04	+ ·14	19·704	·066	− ·018	20 : 21	7·76 : 7·70	2992
595†	4·0	78 Leonis ι	18 42·829	− ·077	3·1297	− ·0064	+ ·0105	+11 4 47·99	+ ·62	19·807	·074	− ·085	29	7·30	2999
596	6·7	Lacaille 4736	11 19 34·930	+ ·015	+ 2·8583	+ ·0226	− ·0020	−42 7 11·51	+ ·14	−19·754	− ·065	− ·018	21	7·60	3003
597†	4·2	15 Crateris *pr.* γ	19 53·050	+ ·061	2·9331	+ ·0083	− ·0075	−17 8 5·41	+ ·02	19·744	·067	− ·003	17 : 18	8·17	3005
598	5·5	Lacaille 4739	20 38·410	+ ·080	2·8992	+ ·0184	− ·0101	−35 30 50·03	− ·06	19·745	·064	+ ·007	16	7·89	3010
599	6·7	83 Leonis	21 41·236	+ ·415	3·0380	− ·0020	− ·0482	+ 3 33 30·70	− 1·49	19·594	·064	+ ·173	18 : 19	8·60	3014
600	5·3	84 Leonis τ	22 47·704	− ·011	3·0865	− ·0020	+ ·0013	+ 3 24 24·77	+ ·16	19·802	·064	− ·019	23 : 22	8·62 : 8·46	3021

554. 4·5, 5·0 0″·7 261° 1897·1.
564. L, > 1–7·4 ; irregular.
565. 2·6, 7·1 2″·2 61° 1900·4.
579. 5·8, 11·8 2″·3 86° 1902·6.

591. 3·5, 10·0 7″·5 146° 1905·2.
595. 4·0, 7·2 2″·6 ; binary. No note of duplicity.
597. 4·2, 10·5 5″·5 94° 1898·2.

No.	Mag.	Name.	Mean R.A. 1900·0.	$\mu_\alpha \Delta E$.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	Mean Dec. 1900·0.	$\mu_\delta \Delta E$.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	No. of Obs.	Epoch 1900+.	Boss No.
			h m s	s	s	s	s	° ′ ″	″	″	″	″			
601	8·4*	Gilliss P.Z. 7980	11 22 49·10	...	−13·396	−21·838	...	−89 14 56·25	...	−19·784	+ ·324	...	25 : 42	11·52 : 9·87	...
602	7·6	C. G. A. 15761	23 43·59	...	− 6·162	− 6·471	...	−88 41 35·47	...	19·796	+ ·150	...	32 : 47	11·52 : 10·40	
603	5·1	87 Leonis ... e	25 12·326	− ·011	+ 3·0650	+ ·0012	+·0013	− 2 27 6·61	+ ·14	19·833	− ·059	− ·017	22 : 24	8·53 : 8·47	3029
604	3·6	Hydræ ... ξ	28 4·810	+ ·117	2·9436	·0166	−·0159	−31 18 15·66	+ ·37	19·904	·051	− ·051	27	7·35	3042
605	5·5	Centauri ... C²	31 4·670	− ·019	2·8940	·0285	+·0026	−47 5 14·01	+ ·40	19·942	·045	− ·055	22	7·20	3053
606	3·1	Centauri ... λ	11 31 9·998	+ ·050	+ 2·7447	+ ·0451	−·0060	−62 27 59·41	+ ·18	−19·910	− ·042	− ·022	19 : 21	8·34 : 8·22	3054
607	4·5	91 Leonis ... υ	31 49·727	·000	3·0716	·0004	·0000	− 0 16 17·74	− ·27	19·861	·046	+ ·035	27 : 25	7·95 : 7·81	3058
608	5·8	Chamæleontis ... π	33 7·808	+ ·183	2·4497	+ ·0680	−·0250	−75 20 34·47	+ ·18	19·933	·033	− ·024	24 : 26	7·33	3064
609	7·5	Lacaille 4865	35 10·35	...	1·443	− ·019	...	−84 55 57·95	...	19·929	·014	...	39 : 62	11·48 : 10·12	...
610*	4·9	Hydræ ... o	35 14·691	+ ·018	2·9721	+ ·0194	−·0024	−34 11 25·52	− ·01	19·929	·038	+ ·001	36 : 38	7·48 : 7·46	3073
611	5·0	27 Crateris ... ζ	11 39 41·627	− ·020	+ 3·0368	+ ·0101	+·0024	−17 47 41·57	+ ·32	−20·007	− ·031	− ·039	16 : 17	8·30 : 8·31	3087
612	4·3	3 Virginis ... ν	40 43·161	+ ·011	3·0851	− ·0030	−·0012	+ 7 5 21·43	+ 1·68	20·163	·029	− ·187	16 : 17	9·04 : 9·00	3089
613	5·5	Lacaille 4878	40 46·893	+ ·045	2·9535	+ ·0284	−·0064	−45 8 5·51	·00	19·976	·028	·000	23	7·03	3091
614	3·7	Muscæ ... λ	40 52·967	+ ·131	2·8041	·0566	−·0161	−66 10 27·45	− ·22	19·949	·025	+ ·028	21 : 23	8·12 : 7·92	3092
615	4·1	Lacaille 4885	41 40·399	+ ·032	2·8791	·0471	−·0036	−60 37 20·70	+ ·26	20·012	·025	− ·029	16	8·92	3094
616	5·6	Lacaille 4898	11 43 41·967	+ ·006	+ 3·0249	+ ·0152	−·0007	−26 11 37·54	+ ·21	−20·022	− ·023	− ·026	24 : 25	7·95 : 8·00	3100
617	2·2	94 Leonis ... β	43 57·284	+ ·289	3·0634	− ·0071	−·0342	+15 7 50·72	+ 1·06	20·121	·022	− ·123	28 : 31	8·46 : 8·65	3101
618	3·6	5 Virginis ... β	45 29·592	− ·402	3·1253	− ·0002	+·0495	+ 2 19 39·52	+ 2·25	20·286	·021	− ·279	26 : 25	8·13 : 8·05	3105
619	4·5	Centauri ... B	46 8·592	+ ·067	2·9835	+ ·0288	−·0092	−44 37 1·49	·00	20·010	·018	·000	27 : 29	7·26 : 7·23	3109
620	5·7	95 Leonis ... o	50 31·995	− ·014	3·0901	− ·0074	+·0017	+16 12 11·55	+ ·06	20·037	·010	− ·007	30 : 31	8·21	3123
621	5·7	Lacaille 4959	11 53 11·800	+ ·011	+ 3·0126	+ ·0436	−·0015	−55 45 37·94	+ ·19	−20·064	− ·005	− ·026	33	7·42	3129
622	6·3	Lacaille 4966	54 6·131	+ ·018	3·0271	+ ·0375	−·0026	−51 8 23·07	+ ·11	20·055	·003	− ·015	20 : 21	7·04 : 7·00	3133
623	5·5	7 Virginis ... b	54 49·589	+ ·010	3·0735	− ·0006	−·0011	+ 4 12 43·28	+ ·16	20·060	− ·002	− ·018	18 : 19	8·85	3135
624	4·7	8 Virginis ... π	55 44·935	+ ·003	3·0752	− ·0022	−·0003	+ 7 10 18·62	+ ·29	20·076	·000	− ·033	20	8·98 : 8·83	3139
625	6·0	Lacaille 4991	57 18·62	+ ·59	2·839	+ ·296	−·051	−85 4 29·63	+ ·01	20·047	+ ·004	− ·001	47 : 74	11·52 : 10·10	3144
626	4·4	Crucis ... θ¹	11 57 55·676	+ ·155	+ 3·0277	+ ·0581	−·0212	−62 45 22·27	+ ·06	−20·054	+ ·004	− ·008	23 : 25	7·32 : 7·16	3146
627	5·4	Lacaille 4992	11 58 28·970	− ·235	3·0930	+ ·0289	+·0286	−41 52 27·65	+ 1·03	20·171	·006	− ·125	21 : 22	8·20 : 8·25	3148
628	4·3	9 Virginis ... o	12 0 6·823	+ ·109	3·0575	− ·0030	−·0147	+ 9 17 18·65	− ·29	20·009	·009	+ ·038	40 : 46	7·39 : 7·52	3155
629	5·7	Centauri ... E	3 3·887	+ ·021	3·0894	+ ·0357	−·0029	−48 8 8·30	+ ·24	20·079	·015	− ·034	25	7·10	3163
630	2·7	Centauri ... δ	3 10·460	+ ·035	3·0904	·0382	−·0041	−50 9 55·70	+ ·15	20·062	·015	− ·017	15	8·61	3165
631	6·1	Lacaille 5036	12 3 43·293	+ ·051	+ 3·0872	+ ·0310	−·0059	−43 46 5·74	+ ·56	−20·111	+ ·016	− ·067	17 : 20	8·64 : 8·41	3167
632	6·3	10 Virginis	4 33·872	− ·028	3·0742	·0008	+·0030	+ 2 27 31·90	+ 1·73	20·227	·018	− ·184	16	9·39	3169
633	3·1	2 Corvi ... ε	4 58·812	+ ·035	3·0794	·0143	−·0047	−22 3 48·94	− ·05	20·035	·018	+ ·007	30 : 32	7·45 : 7·65	3172
634	6·9	Lacaille 5096	9 30·82	+ ·84	4·486	1·534	−·072	−87 51 33·57	·00	20·030	·035	·000	21 : 42	11·55 : 9·22	3185
635	2·9	Crucis ... δ	9 49·929	+ ·042	3·1593	·0532	−·0055	−58 11 33·25	+ ·15	20·047	·028	− ·019	19 : 21	7·69 : 7·72	3187
636	2·6	4 Corvi ... γ	12 10 39·641	+ ·099	+ 3·0801	+ ·0116	−·0112	−16 59 12·06	− ·10	−20·014	+ ·029	+ ·011	20 : 19	8·84 : 8·81	3191
637	4·1	Muscæ ... ε	12 9·522	+ ·331	3·2022	·0802	−·0405	−67 24 15·60	+ ·35	20·063	·033	− ·044	18 : 20	8·18 : 7·91	3197
638	4·3	Chamæleontis ... β	12 28·392	+ ·146	3·4218	·1865	−·0163	−78 45 25·18	− ·11	20·005	·036	+ ·012	35 : 37	8·95 : 8·84	3199
639	4·0	15 Virginis ... η	14 47·339	+ ·032	3·0684	·0028	−·0041	− 0 6 40·32	+ ·19	20·030	·037	− ·025	33 : 32	7·88 : 7·64	3210
640	5·1	16 Virginis ... c	15 16·095	+ ·171	3·0465	·0008	−·0198	+ 3 52 9·23	+ ·67	20·080	·038	− ·078	21 : 23	8·64 : 8·61	3213
641	3·4	Crucis ... ε	12 15 57·451	+ ·189	+ 3·2081	+ ·0585	−·0243	−59 50 54·39	− ·60	− 19·920	+ ·041	+ ·078	21 : 23	7·77 : 7·68	3218
642	4·9	12 Comæ	17 28·725	+ ·005	3·0212	− ·0114	−·0006	+26 24 3·88	+ ·12	20·003	·042	− ·014	20 : 22	8·52 : 8·50	3224
643	6·7	Lacaille 5107	17 37·06	+ ·19	4·388	+ ·720	−·016	−85 35 45·58	+ ·06	19·994	·057	− ·006	45 : 69	11·59 : 10·10	3225
644	6·3	Lacaille 5141	19 50·416	+ ·085	3·1762	·0315	−·013*	−41 57 34·48	+ ·26	19·972	·048	− ·04*	19	6·57	...
645†	6·0	Centauri ... m. x²	20 5·478	+ ·025	3·1499	+ ·0246	−·0033	−34 37 55·77	+ ·10	19·983	·049	− ·013	17 : 19	7·72 : 7·69	3232
646	5·2	14 Comæ	12 21 24·050	+ ·015	+ 3·0049	− ·0119	−·0017	+27 49 19·79	+ ·16	− 19·978	+ ·049	− ·018	16	8·96	3240
647	5·8	Lacaille 5154	21 35·397	+ ·008	3·1508	+ ·0228	−·0009	−32 16 32·67	+ ·35	19·997	·052	− ·039	16 : 17	8·94 : 8·88	3241
648	4·6	15 Comæ	21 57·229	+ ·062	2·9954	− ·0124	−·0066	+28 49 26·48	+ ·82	20·042	·050	− ·087	16	9·44	3242
649	4·1	Centauri ... σ	22 37·779	+ ·026	3·2238	+ ·0415	−·0038	−49 40 36·54	+ ·19	19·977	·055	− ·028	21 : 22	6·81 : 6·76	3245
650	6·3	Mayer 525	22 43·628	+ ·049	3·0763	·0053	−·0054	− 4 3 43·34	+ ·08	19·957	·053	− ·009	16 : 18	9·08 : 9·04	3247

610. Greek letter not in Auwers' Bradley.
645. 6·7, 6·9 0″·2 41° 1897·5.

No.	Mag.	Name.	Mean R.A. 1900·0.	$\mu_\alpha\Delta$E.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	Mean Dec. 1900·0.	$\mu_\delta\Delta$E.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	No. of Obs.	Epoch 1900+.	Boss No.
			h m s	s	s	s	s	° ′ ″	″	″	″	″			
651	3·0	7 Corvi *seq.* δ	12 24 41·221	+ ·110	+ 3·0990	+ ·0119	− ·0144	−15 57 32·67	+ 1·10	− 20·074	+ ·057	− ·143	27 : 29	7·66 : 7·70	3256
652	5·9	20 Comæ	24 41·857	− ·022	3·0186	− ·0080	+ ·0027	+21 26 59·36	+ ·36	19·976	·056	− ·046	16 : 20	8·21 : 7·93	3257
653	1·3	Crucis γ	25 37·019	− ·018	3·3003	+ ·0549	+ ·0023	−56 33 13·65	+ 2·15	20·194	·062	− ·272	17	7·92	3263
654	4·0	Muscæ γ	26 29·339	+ ·074	3·5260	·1188	− ·0092	−71 34 49·85	+ ·10	19·926	·068	− ·013	23 : 25	8·00 : 7·96	3269
655	2·8	9 Corvi β	29 7·987	·000	3·1437	+ ·0165	·0000	−22 50 37·91	+ ·47	19·946	·067	− ·061	39 : 36	8·20 : 7·76	3280
656	4·9	23 Comæ	12 29 52·098	+ ·044	+ 2·9928	− ·0085	− ·0052	+23 10 47·78	− ·06	− 19·871	+ ·065	+ ·007	17	8·48	3283
657	5·3	24 Comæ *seq.*	30 6·833	− ·002	3·0127	− ·0062	+ ·0003	+18 55 39·23	− ·12	19·858	·066	+ ·016	21 : 22	7·69 : 7·62	3285
658	2·7	Muscæ α	31 12·950	+ ·063	3·5285	+ ·1013	− ·0065	−68 35 4·35	+ ·20	19·882	·078	− ·021	16 : 17	9·62	3289
659	6·1	25 Virginis f	31 38·263	+ ·017	3·0873	·0064	− ·0020	− 5 16 51·09	+ ·23	19·883	·070	− ·027	16	8·59	3290
660	4·0	Centauri τ	32 13·777	+ ·135	3·2606	·0404	− ·0197	−47 59 26·73	+ ·12	19·867	·075	− ·018	22	6·84	3292
661	4·8	26 Virginis χ	12 34 5·020	+ ·042	+ 3·0031	+ ·0077	− ·0051	− 7 26 43·07	+ ·31	− 19·863	+ ·075	− ·037	21	8·29	3298
662†	2·1	Centauri *m.* γ	35 59·857	+ ·142	3·2878	+ ·0416	− ·0201	−48 24 38·07	+ ·10	19·815	·083	− ·015	27 : 28	7·04 : 6·96	3302
663	5·0	30 Virginis ρ	36 49·442	− ·053	3·0377	− ·0015	+ ·0061	+10 47 11·12	+ ·86	19·890	·079	− ·101	22	8·67 : 8·53	3309
664	5·8	Piazzi XII. 168	38 40·595	+ ·021	3·1876	+ ·0206	− ·0030	−27 46 30·77	+ ·38	19·816	·086	− ·054	25 : 27	7·09 : 7·06	3318
665†	3·1	Muscæ *m.* β	40 8·616	+ ·039	3·6312	+ ·1010	− ·0051	−67 33 38·43	+ ·22	19·769	·101	− ·029	18	7·58	3320
666	5·4	32 Virginis d²	12 40 33·849	+ ·066	+ 3·0308	·0000	− ·0076	+ 8 13 12·40	− ·01	− 19·733	+ ·086	+ ·001	17	8·64	3323
667	7·1	Lacaille 5235	40 58·76	+ ·80	21·172	+28·711	− ·072	−89 15 0·86	+ ·11	19·738	·556	− ·011	38 : 53	11·61 : 9·99	3325
668	1·1	Crucis β	41 52·502	+ ·051	3·4726	+ ·0660	− ·0062	−59 8 31·60	+ ·23	19·741	·100	− ·028	19	8·17	3328
669	6·8	35 Virginis	42 45·884	+ ·003	3·0542	·0022	− ·0003	+ 4 7 7·14	+ ·10	19·711	·091	− ·012	17 : 18	8·61	3331
670	5·5	Octantis ι	44 27·84	− ·51	5·831	·866	+ ·044	−84 34 48·46	− ·09	19·661	·173	+ ·010	54 : 167	11·58 : 8·80	3340
671	5·1	Centauri p	12 45 15·498	+ ·025	+ 3·2426	+ ·0258	− ·0030	−33 27 14·90	+ ·30	− 19·693	+ ·101	− ·036	17 : 18	8·38 : 8·23	3342
672	5·1	31 Comæ	46 49·668	+ ·011	2·9264	− ·0096	− ·0012	+28 5 5·11	+ ·24	19·656	·095	− ·026	16	9·11	3347
673	4·3	Centauri n	47 53·847	− ·040	3·3078	+ ·0323	+ ·0058	−39 38 6·18	+ ·26	19·649	·109	− ·038	21 : 23	6·90	3352
674	5·0	40 Virginis ψ	49 9·098	+ ·013	3·1158	·0093	− ·0016	− 8 59 45·43	+ ·17	19·609	·105	− ·021	21	8·04	3362
675	3·6	43 Virginis δ	50 33·726	+ ·244	3·0205	·0027	− ·0317	+ 3 56 26·50	+ ·48	19·625	·104	− ·064	46	7·71 : 7·51	3367
676	3·5	Muscæ δ	12 55 23·669	− ·381	+ 4·0554	+ ·1427	+ ·0536	−71 0 34·67	+ ·21	− 19·494	+ ·152	− ·030	29	7·10	3377
677	2·8	47 Virginis ε	57 11·793	+ ·144	2·9867	− ·0006	− ·0185	+11 29 47·95	− ·13	19·409	·115	+ ·017	38 : 36	7·79 : 7·66	3383
678	7·1	Lacaille 5325	57 20·34	...	9·435	+ 2·862	...	−87 1 22·97	...	19·423	·349	...	57 : 77	11·61 : 10·60	...
679†	6·9	48 Virginis m	12 58 45·195	+ ·026	3·0878	·0066	− ·0030	− 3 7 31·40	+ ·34	19·432	·122	− ·040	24	8·50	3388
680	4·4	Centauri ξ²	13 1 4·223	+ ·026	3·4789	·0475	− ·0036	−49 22 14·19	+ ·17	19·364	·142	− ·024	28	7·19	3393
681	6·1	Lacaille 5398	13 1 41·601	+ ·036	+ 3·5379	+ ·0547	− ·0048	−52 55 27·56	+ ·24	−19·357	+ ·145	− ·032	26	7·43	3400
682†	4·4	51 Virginis *seq.* θ	4 46·279	+ ·023	3·1024	·0079	− ·0026	− 5 0 18·99	+ ·37	19·294	·134	− ·042	40 : 37	8·83 : 8·75	3409
683	5·3	Lacaille 5422	5 39·974	+ ·091	3·4110	·0376	− ·0116	−42 50 9·34	+ ·34	19·273	·148	− ·043	18	7·87	3417
684†	4·7	Lacaille 5418 *seq.*	6 2·784	+ ·056	3·7076	+ ·0736	− ·0067	−59 23 18·59	+ ·29	19·254	·161	− ·034	17	8·42	3419
685	4·3	43 Comæ	7 11·977	+ ·438	2·8032	− ·0076	− ·0604	+28 23 12·64	− 6·36	18·316	·124	+ ·875	22 : 23	7·25 : 7·27	3424
686	5·0	Muscæ η	13 8 27·958	+ ·033	+ 4·0112	+ ·1154	− ·0045	−67 21 52·54	+ ·14	−19·178	+ ·180	− ·019	24	7·32	3429
687	5·3	Centauri r	11 19·783	− ·015	3·3201	·0254	+ ·0021	−30 58 37·09	+ ·47	19·148	·156	− ·064	25	7·35	3440
688	6·0	Lacaille 5464	11 25·876	+ ·003	3·4602	·0392	− ·0005	−43 27 5·20	+ ·22	19·112	·163	− ·031	18	6·98	3441
689	5·0	60 Virginis σ	12 33·304	+ ·008	3·0277	·0028	− ·0009	+ 5 59 47·96	− ·08	19·042	·146	+ ·009	16 : 17	8·63 : 8·66	3446
690	4·8	61 Virginis	13 9·677	+ ·676	3·1313	·0156	− ·0754	−17 45 28·04	+ 9·72	20·118	·148	−1·084	16	8·97	3448
691	3·2	46 Hydræ γ	13 13 29·085	− ·041	+ 3·2529	+ ·0189	+ ·0048	−22 38 39·01	+ ·44	−19·076	+ ·158	− ·051	39	8·60 : 8·59	3449
692	2·8	Centauri ι	14 58·248	+ ·208	3·3584	·0303	− ·9281	−36 11 6·19	+ ·71	19·078	·164	− ·094	23 : 24	7·41 : 7·53	3452
693	6·2	Lacaille 5498	16 11·172	+ ·023	3·6207	·0541	− ·0031	−51 39 32·44	− ·01	18·947	·180	+ ·002	22	7·35	3458
694	6·7	Lacaille 5507	17 4·006	+ ·005	3·5622	·0471	− ·0006	−48 2 22·28	− ·06	18·916	·179	+ ·008	23 : 24	7·97 : 7·92	3461
695	7·4	Lacaille 5452	19 42·39	+ ·05	8·618	1·580	− ·004	−85 18 26·29	+ ·07	18·853	·436	− ·007	36 : 59	11·57 : 10·06	3473
696	0·9	67 Virginis α	13 19 55·418	+ ·019	+ 3·1553	+ ·0116	− ·0028	−10 38 22·28	+ ·25	−18·876	+ ·165	− ·036	29	6·91	3476
697	8·0	Lacaille 5444	21 24·49	...	10·091	2·356	...	−86 12 39·93	...	18·795	·519	...	28 : 40	11·66 : 10·22	...
698	5·7	68 Virginis i	21 26·045	+ ·083	3·1636	·0125	− ·0092	−12 11 14·87	+ ·19	18·817	·168	− ·022	33 : 26	9·00 : 8·52	3481
699	5·2	70 Virginis	23 32·189	+ ·146	2·9341	·0001	− ·0167	+14 18 40·99	+ 5·13	19·316	·160	− ·586	17 : 18	8·76 : 8·75	3487
700	5·7	Octantis κ	24 41·34	+ ·85	8·838	1·606	− ·073	−85 16 24·77	+ ·22	18·717	·469	− ·024	59 : 148	11·62 : 9·04	3493

662. 2·9, 2·9; close binary.
665. 3·7, 4·0 1″·3 341° 1900·4.
679. 7·6, 7·8 0″·6 219° 1899·4.
682. 4·4, 8·9 6″·8 344° 1905·3.
684. 4·7, 8·5 1″·7 349° 1913·0.

No.	Mag.	Name.	Mean R.A. 1900·0.	$\mu_\alpha\Delta E$.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	Mean Dec. 1900·0.	$\mu_\delta\Delta E$.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	No. of Obs.	Epoch 1900+.	Boss No.
			h m s	s	s	s	s	° ′ ″	″	″	″	″			
701†	3·8	Centauri .... m. d	13 25 14·605	+ ·010	+ 3·4628	+ ·0342	− ·0013	−38 53 27·11	+ ·20	−18·701	+ ·191	− ·025	20	8·01	3496
702	6·1	73 Virginis	26 39·117	+ ·055	3·2284	·0103	− ·0063	−18 12 48·71	+ ·20	18·654	·181	− ·023	16 : 17	8·76	3498
703	5·9	Lacaille 5580	27 1·586	+ ·065	3·3294	·0236	− ·0083	−28 10 39·43	+ ·16	18·640	·187	− ·021	19	7·78	3502
704	3·3	79 Virginis .... ζ	29 35·679	+ ·146	3·0540	·0064	− ·0191	− 0 5 4·81	− ·25	18·500	·176	+ ·034	47 : 45	7·63 : 7·39	3508
705	6·6	Lacaille 5577	30 38·171	+ ·061	5·0096	·2413	− ·0078	−75 10 25·47	+ ·28	18·536	·289	− ·036	21	7·85	3514
706	2·3	Centauri .... ε	13 33 32·963	+ ·024	+ 3·7719	+ ·0592	− ·0034	−52 57 28·39	+ ·19	−18·427	+ ·226	− ·027	23 : 24	7·18 : 7·14	3521
707	8·7	C. G. A. 18500	35 1·39	...	13·771	4·327	...	−87 7 9·08	...	18·348	·816	...	28 : 44	11·67 : 10·25	...
708	5·3	82 Virginis .... m	36 21·704	+ ·059	3·1440	·0108	− ·0069	− 8 11 54·36	− ·30	18·265	·194	+ ·036	27 : 22	8·61 : 8·27	3534
709	5·9	83 Virginis	39 6·005	− ·004	3·2300	·0151	+ ·0005	−15 40 34·38	+ ·04	18·207	·205	− ·005	17	8·63	3542
710	4·3	1 Centauri i	39 59·915	+ ·286	3·3959	·0277	− ·0368	−32 32 18·11	+ 1·18	18·321	·215	− ·153	18 : 19	7·76 : 7·72	3544
711	4·7	Centauri .... M	13 40 19·437	− ·002	+ 3·7704	+ ·0550	+ ·0002	−50 55 51·89	+ ·31	−18·189	+ ·241	− ·032	16	9·55	3547
712	4·6	4 Bootis .... τ	42 30·310	+ ·295	2·8510	− ·0005	− ·0340	+17 57 18·95	− ·22	18·049	·185	+ ·026	19 : 20	8·69 : 8·54	3558
713	3·5	Centauri .... ν	43 30·280	+ ·027	3·5798	+ ·0380	− ·0030	−41 11 21·86	+ ·23	18·062	·235	− ·025	16	9·14	3564
714	3·3	Centauri .... μ	43 35·443	+ ·018	3·5955	·0392	− ·0020	−41 58 32·07	+ ·16	18·052	·236	− ·018	18	8·98	3565
715	5·2	89 Virginis	44 26·149	+ ·056	3·2524	·0164	− ·0069	−17 38 10·55	+ ·35	18·044	·216	− ·043	35 : 34	8·12 : 8·15	3571
716	4·8	4 Centauri .... h	13 47 27·060	+ ·011	+ 3·4400	+ ·0271	− ·0014	−31 26 1·95	+ ·17	−17·905	+ ·234	− ·021	18	8·07	3586
717	6·0	7 Boötis	48 26·200	+ ·024	2·8667	− ·0005	− ·0027	+18 25 32·08	+ ·11	17·857	·198	− ·013	17	8·84	3588
718	2·6	Centauri .... ζ	49 17·942	+ ·043	3·7195	+ ·0471	− ·0060	−46 47 45·76	+ ·38	17·863	·256	− ·053	21	7·19	3593
719	2·7	8 Bootis .... η	49 55·350	+ ·038	2·8567	− ·0003	− ·0045	+18 53 52·81	+ 3·11	18·152	·199	− ·367	33 : 34	8·53 : 8·48	3596
720	4·7	Lacaille 5733	50 24·453	+ ·047	4·2927	+ ·1008	− ·0053	−63 11 47·51	+ ·46	17·817	·297	− ·052	17	8·81	3599
721	6·1	92 Virginis	13 51 22·142	+ ·020	+ 3·0533	+ ·0065	− ·0023	+ 1 32 22·42	− ·11	−17·714	+ ·215	+ ·012	16	8·77	3600
722	4·0	Centauri .... φ	52 11·415	+ ·017	3·6281	·0389	− ·0024	−41 36 44·31	+ ·15	17·712	·256	− ·020	19	7·27	3602
723	4·0	Centauri .... υ^1	52 30·028	+ ·024	3·6844	·0430	− ·0031	−44 18 55·78	+ ·25	17·712	·260	− ·032	19	7·83	3603
724	5·3	47 Hydræ	52 54·361	+ ·028	3·3566	·0214	− ·0036	−24 29 3·09	+ ·32	17·704	·238	− ·041	19	7·88	3604
725	6·0	48 Hydræ	54 23·906	+ ·123	3·3490	·0214	− ·0152	−24 31 21·22	+ ·90	17·712	·240	− ·111	19	8·07	3607
726	var.	Apodis .... θ	13 55 34·288	+ ·242	+ 5·6981	+ ·2975	− ·0261	−76 18 50·82	+ ·37	−17·591	+ ·407	− ·040	32	9·27	3611
727	4·3	93 Virginis .... τ	56 33·400	− ·009	3·0506	+ ·0065	+ ·0013	+ 2 1 41·98	+ ·18	17·535	·224	− ·025	22 : 23	7·19 : 7·14	3612
728	6·3	11 Bootis	56 38·365	+ ·045	2·7220	− ·0031	− ·0060	+27 52 10·48	− ·02	17·503	·200	+ ·003	19	7·56	3613
729	0·5	Centauri .... β	56 45·773	+ ·033	4·1929	+ ·0848	− ·0035	−59 53 26·33	+ ·30	17·533	·305	− ·032	17	9·46	3615
730	4·6	Centauri .... χ	13 59 56·345	+ ·011	3·6453	·0378	− ·0016	−40 42 1·79	+ ·23	17·398	·273	− ·034	20	6·65	3621
731	3·4	49 Hydræ .... π	14 0 40·524	− ·025	+ 3·4059	+ ·0230	+ ·0031	−26 12 3·13	+ 1·27	−17·491	+ ·257	− ·160	19	7·96	3622
732	2·0	5 Centauri .... θ	0 47·377	+ ·404	3·5150	·0318	− ·0436	−35 52 45·76	+ 4·89	17·854	·262	− ·528	16	9·27	3623
733	6·9	94 Virginis	0 59·980	+ ·005	3·1714	·0115	− ·0005	− 8 24 51·27	− ·08	17·308	·240	+ ·009	16 : 15	9·29 : 9·24	3624
734	5·0	Apodis .... η	5 39·	...	7·2354	+ ·5751	− ·0170	−80 32 20·51	+ ·59	17·186	·556	− ·078	5	7·51	3633
735	4·9	12 Boötis .... d	5 50·221	+ ·012	2·7370	− ·0017	− ·0017	+25 33 54·74	+ ·51	17·172	·215	− ·072	26	7·03	3635
736	4·2	98 Virginis .... κ	14 7 33·621	− ·004	+ 3·1949	+ ·0123	+ ·0005	− 9 48 28·95	− 1·06	−16·891	+ ·253	+ ·130	37	8·22 : 8·12	3642
737	4·1	99 Virginis .... ι	10 46·188	+ ·009	3·1409	·0106	− ·0012	− 5 31 27·57	+ 3·08	17·298	·254	− ·427	21 : 23	7·33 : 7·22	3660
738	4·1	Octantis .... δ	10 51·03	+ ·60	9·087	1·043	− ·052	−83 12 35·12	+ ·15	16·880	·719	− ·013	44 : 47	11·63 : 11·37	3661
739	0·0	16 Bootis .... α	11 5·443	+ ·578	2·7352	·0025	− ·0781	+19 41 55·82	+14·82	18·858	·217	−2·003	24	7·40	3662
740	3·8	Lupi .... ι	12 59·947	+ ·007	3·8196	·0454	− ·0009	−45 35 47·41	+ ·06	16·773	·312	− ·008	20	7·58	3668
741	4·4	Centauri .... υ	14 13 20·242	+ ·020	+ 4·1552	+ ·0703	− ·0029	−55 55 32·64	+ ·15	−16·770	+ ·340	− ·021	21	7·01	3670
742	4·6	100 Virginis .... λ	13 41·840	+ ·013	3·2396	·0141	− ·0015	−12 54 39·09	− ·20	16·708	·267	+ ·023	23 : 20	8·89 : 8·70	3672
743	8·1	Brisbane 4614	13 48·13	...	42·175	34·972	...	−88 55 14·51	...	16·726	3·396	...	38 : 55	11·63 : 10·37	...
744	5·8	Lacaille 5890	16 48·517	+ ·019	4·9054	·1396	− ·0024	−67 44 25·49	+ ·17	16·602	·409	− ·022	19 : 20	7·84 : 7·73	3680
745	4·6	Centauri .... α	16 52·419	+ ·017	3·6797	·0356	− ·0024	−39 3 18·44	+ ·28	16·617	·308	− ·040	23	6·94	3688
746	6·6	2 Libræ	14 18 2·682	+ ·009	+ 3·2221	+ ·0133	− ·0010	−11 15 27·24	+ ·58	−16·583	+ ·273	− ·064	18 : 19	9·17 : 9·11	3691
747	7·5	Lacaille 5921	18 30·562	+ ·033	3·7128	·0373	− ·0036	−40 18 2·94	+ ·38	16·538	·314	− ·042	16	9·11	3693
748	5·5	Lacaille 5929	19 6·158	+ ·039	3·4119	·0214	− ·0055	−24 21 9·09	+ ·22	16·497	·290	− ·031	18	7·12	3695
749	4·7	Lupi .... τ^1	19 42·960	+ ·008	3·8305	·0440	− ·0009	−44 46 8·56	+ ·25	16·465	·327	− ·029	17	8·57	3699
750	4·4	Lupi .... τ^2	19 44·843	− ·002	3·8361	·0442	+ ·0003	−44 55 37·75	+ ·16	16·454	·327	− ·020	20 : 21	7·86 : 8·06	3700

701. 4·4, 4·7 0″·3 105° 1897·2.
726. L, 5·5–6·5; P, probably irregular.

No.	Mag.	Name.	Mean R.A. 1900·0.	$\mu_\alpha \Delta E$.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	Mean Dec. 1900·0.	$\mu_\delta \Delta E$.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	No. of Obs.	Epoch 1900+.	Boss No.
			h m s	s	s	s	s	° ′ ″	″	″	″	″			
751	5·6	22 Boötis……f	14 21 48·209	+ ·045	+ 2·7900	+ ·0010	− ·0052	+19 40 35·14	− ·13	−16·315	+ ·242	+ ·015	19	8·58	3705
752†	5·1	52 Hydræ……seq.	22 18·867	+ ·014	3·5022	·0251	− ·0019	−29 2 32·43	+ ·24	16·337	·304	− ·033	24	7·13	3707
753†	5·0	105 Virginis……pr. φ	23 2·864	+ ·066	3·0877	·0088	− ·0089	− 1 46 47·49	+ ·07	16·277	·269	− ·010	23	7·45	3710
754	4·6	Lupi……σ	25 52·641	+ ·039	4·0141	+ ·0539	− ·0054	−50 0 49·68	+ ·09	16·134	·354	− ·013	28	7·20	3716
755	3·8	25 Boötis……ρ	27 31·131	+ ·056	2·5862	− ·0015	− ·0078	+30 48 37·86	− ·79	15·925	·232	+ ·110	21	7·16	3717
756	2·4	Centauri……η	14 29 9·326	+ ·022	+ 3·7912	+ ·0390	− ·0030	−41 43 7·40	+ ·25	−15·984	+ ·341	− ·035	25 : 26	7·17 : 7·13	3724
757	6·3	Lacaille 5994……	29 11·914	+ ·008	3·7772	+ ·0381	− ·0011	−41 4 42·94	+ ·23	15·977	·340	− ·030	16	7·62	3725
758	4·6	28 Boötis……σ	30 19·688	− ·131	2·6132	− ·0014	+ ·0149	+30 10 47·28	− 1·06	15·767	·240	+ ·120	17 : 18	8·80	3729
759	4·1	Lupi……ρ	31 9·425	+ ·030	4·0105	+ ·0515	− ·0036	−48 59 24·21	+ ·31	15·879	·365	− ·037	16 : 17	8·35 : 8·39	3732
760	6·5	Mayer 592……	31 39·946	+ ·554	3·1857	·0131	− ·0594	−11 52 45·88	− 3·36	15·451	·287	+ ·364	17 : 18	9·32 : 9·22	3734
761*	0·3	Centauri……α^2	14 32 44·344	+4·547	+ 4·0412	+ ·0731	− ·4874	−60 25 7·39	− 6·78	−15·025	+ ·338	+ ·729	17 : 18	9·33 : 9·30	3735
762*	8·7*	Gilliss P. Z. 10018…	34 18·64	…	30·656	14·641	…	−88 16 10·03	…	15·672	2·793	…	15	11·68	…
763	3·2	Circini……α	34 25·040	+ ·291	4·7927	·1123	− ·0310	−64 32 25·21	+ 2·20	15·902	·440	− ·236	16 : 18	9·39 : 9·31	3739
764	2·3	Lupi……α	35 16·604	+ ·018	3·9674	·0473	− ·0021	−46 57 32·26	+ ·24	15·647	·369	− ·028	17 : 18	8·69	3745
765	3·7	Apodis……α	35 25·589	+ ·060	7·2319	·4353	− ·0063	−78 37 13·07	+ ·26	15·638	·667	− ·027	32	9·47	3746
766†	3·8	30 Boötis……m. ζ	14 36 22·391	− ·031	+ 2·8636	+ ·0033	+ ·0038	+14 9 25·60	+ ·21	−15·586	+ ·270	− ·027	15 : 17	8·13 : 7·66	3752
767	7·8	Lacaille 5882……	36 37·01	…	15·332	3·023	…	−86 3 44·25	…	15·545	1·418	…	17 : 37	11·63 : 9·55	…
768	5·4	Lacaille 6039……	37 21·748	− ·076	4·7054	·0992	+ ·0091	−62 26 56·43	+ ·71	15·589	·442	− ·085	16 : 17	8·32 : 8·39	3755
769	4·1	Centauri……c^1	37 32·324	+ ·056	3·6543	·0303	− ·0062	−34 44 36·82	+ 1·76	15·687	·344	− ·193	17	9·10	3757
770	3·9	107 Virginis……μ	37 47·421	− ·063	3·1571	·0107	+ ·0071	− 5 13 28·00	+ 2·82	15·802	·300	− ·322	19 : 18	8·85 : 8·75	3758
771	6·8	Octantis……z	14 38 57·81	+2·10	+24·564	+ 8·762	− ·180	−87 44 31·02	+ ·61	−15·480	+2·279	− ·067	39 : 116	11·61 : 9·01	3760
772	5·0	34 Boötis……	39 1·652	+ ·007	2·6369	·0001	− ·0008	+26 57 10·52	+ ·19	15·433	·252	− ·021	16 : 15	9·17 : 9·18	3761
773	6·0	Lacaille 6073……	39 47·624	+ ·055	3·9866	·0471	− ·0066	−47 1 8·97	+ ·26	15·399	·379	− ·031	19 : 20	8·30 : 8·33	3763
774	5·3	Lupi……b	40 1·451	+ ·027	4·1676	·0581	− ·0029	−51 57 37·42	+ ·85	15·445	·397	− ·090	16	9·43	3765
775	6·8	Mayer 596……	40 30·409	+ ·036	3·3950	·0187	− ·0037	−20 45 8·04	+ 1·14	15·446	·325	− ·118	16	9·63	3769
776	3·8	109 Virginis……	14 41 11·484	+ ·066	+ 3·0298	+ ·0074	− ·0076	+ 2 18 50·69	+ ·33	−15·328	+ ·292	− ·038	19	8·73	3772
777	5·5	8 Libræ……	45 9·209	+ ·061	3·3112	·0155	− ·0071	−15 34 54·37	+ ·67	15·141	·324	− ·078	17	8·58	3784
778	2·8	9 Libræ……α	45 20·644	+ ·057	3·3118	·0155	− ·0074	−15 37 35·30	+ ·57	15·128	·324	− ·076	33 : 32	7·74 : 7·44	3787
779	var.	Lacaille 6077……	46 28·605	+ ·160	6·6828	·3127	− ·0185	−76 15 19·09	+ ·09	14·997	·652	− ·011	35 : 34	8·63 : 8·62	3794
780	5·3	Lacaille 6119……	47 51·651	+ ·142	4·5824	·0836	− ·0195	−59 42 12·77	+ ·81	15·017	·451	− ·111	18	7·27	3800
781	6·0	13 Libræ……	14 48 57·014	+ ·036	+ 3·2508	+ ·0133	− ·0042	−11 29 25·63	+ ·19	−14·864	+ ·325	− ·022	19	8·56	3804
782	5·5	Lacaille 6146……	49 36·350	− ·012	3·6693	·0283	+ ·0016	−33 26 58·82	+ ·10	14·816	·367	− ·013	19 : 22	7·79 : 7·77	3807
783	5·8	15 Libræ……	51 20·450	+ ·001	3·2490	·0130	− ·0001	−11 0 22·33	+ ·02	14·703	·328	− ·002	32	9·54 : 9·59	3810
784	6·1	Piazzi XIV. 221……	51 29·986	+ ·010	2·8299	·0036	− ·0013	+14 51 1·25	+ ·12	14·707	·287	− ·016	23	7·52	3811
785	6·3	Piazzi XIV. 212 seq.	51 38·154	− ·657	3·4952	·0207	+ ·0742	−20 58 7·45	+15·56	16·438	·360	−1·754	17 : 18	8·86 : 8·87	3813
786	2·7	Lupi……β	14 51 58·798	+ ·034	+ 3·9099	+ ·0392	− ·0043	−42 43 52·24	+ ·40	−14·714	+ ·395	− ·051	18	7·81	3815
787	3·2	Centauri……κ	52 39·219	+ ·014	3·8855	·0377	− ·0015	−41 42 10·56	+ ·30	14·653	·393	− ·032	16	9·27	3818
788	var.	19 Libræ……δ	55 37·668	+ ·038	3·2000	·0116	− ·0046	− 8 7 20·53	+ ·09	14·454	·329	− ·011	20	8·34	3825
789	3·4	Scorpii 1 H……γ	14 58 12·895	+ ·042	3·5018	·0209	− ·0056	−24 53 20·94	+ ·41	14·340	·364	− ·055	27	7·42	3837
790	4·6	43 Boötis……ψ	15 0 9·523	+ ·100	2·5702	·0012	− ·0133	+27 20 14·75	+ ·15	14·185	·270	− ·020	20 : 23	7·52 : 7·37	3842
791	5·0	45 Boötis……c	15 2 54·621	− ·115	+ 2·6346	+ ·0017	+ ·0138	+25 15 29·49	+ 1·53	−14·177	+ ·282	− ·183	23	8·35	3855
792	4·0	Lupi……κ	4 58·746	+ ·085	4·1479	·0475	− ·0101	−48 21 27·61	+ ·55	13·930	·442	− ·066	17 : 18	8·38	3862
793	3·4	Lupi……ζ	5 5·816	+ ·083	4·2846	·0548	− ·0115	−51 43 7·73	+ ·49	13·925	·456	− ·069	23 : 26	7·24 : 7·17	3864
794	5·0	Lupi……e	6 6·413	+ ·031	4·0093	·0401	− ·0036	−44 7 21·95	+ ·28	13·825	·430	− ·033	18	8·48	3865
795	4·7	24 Libræ……ι	6 31·155	+ ·023	3·4121	·0171	− ·0026	−19 24 48·52	+ ·44	13·815	·367	− ·049	37 : 38	8·95 : 8·93	3866
796	5·1	1 Lupi……	15 8 29·646	− ·002	+ 3·6645	+ ·0251	+ ·0003	−31 8 44·92	+ ·15	−13·658	+ ·397	− ·018	19	8·18	3871
797	2·9	Trianguli Aust.……γ	9 34·056	+ ·083	5·5340	·1397	− ·0114	−68 18 36·60	+ ·17	13·595	·598	− ·024	24 : 26	7·30 : 7·23	3879
798	4·2	Circini……β	9 40·823	+ ·100	4·6611	·0750	− ·0126	−58 25 40·86	+ 1·18	13·711	·505	− ·148	20	7·94	3880
799	5·6	3 Serpentis……	10 13·039	+ ·012	2·9793	·0066	− ·0014	+ 5 18 37·56	+ ·08	13·538	·326	− ·009	16 : 18	8·82 : 8·69	3882
800	3·4	49 Boötis……δ	11 28·280	− ·063	2·4188	·0012	+ ·0071	+33 41 15·13	+ 1·13	13·575	·268	− ·127	16	8·93	3887

752. 5·1, 11·1 4″·2 279° 1901·4.
753. 5·0, 9·3 4″·7 110° 1904·4.
761. Reduction to C. G., −0s·704, −7″·74.
762. Gilliss magnitude = 7·6.

766. 4·4, 4·8; very close binary.
779. L, 5·5–6·2; P, unknown.
788. L, 5·0–5·9; P, 2d·33.

No.	Mag.	Name.	Mean R.A. 1900·0.	$\mu_\alpha\Delta$E.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	Mean Dec. 1900·0.	$\mu_\delta\Delta$E.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	No. of Obs.	Epoch 1900+.	Boss No.
			h m s	s	s	s	s	° ′ ″	″	″	″	″			
801	2·6	27 Libræ ......β	15 11 37·424	+ ·060	+ 3·2230	+ ·0118	− ·0067	− 9 0 50·87	+ ·27	−13·468	+ ·354	− ·030	35 : 39	9·02 : 9·09	3890
802	5·9	Lacaille 6303.........	12 22·854	+ ·016	3·9173	·0344	− ·0022	−40 25 18·30	+ ·23	13·421	·431	− ·032	22 : 24	7·29 : 7·16	3892
803	3·4	Lupi ......δ	14 48·396	+ ·004	3·9228	·0340	− ·0006	−40 17 7·70	+ ·23	13·263	·435	− ·032	25 : 26	7·04 : 7·06	3896
804	7·2	Lacaille 6327.........	15 53·514	+ ·015	4·3323	·0525	− ·0020	−51 22 37·53	+ ·17	13·182	·482	− ·023	22 : 23	7·40 : 7·45	3906
805	4·8	Lupi ......ϕ^2	16 45·920	+ ·014	3·8190	·0294	− ·0018	−36 29 59·91	+ ·23	13·132	·427	− ·031	18 : 19	7·55 : 7·50	3910
806	6·9	30 Libræ	15 17 27·052	+ ·001	+ 3·3398	+ ·0142	− ·0001	−14 46 37·71	− ·01	−13·055	+ ·375	+ ·001	31 : 32	9·74 : 9·68	3913
807	5·8	Octantis......ρ	20 12·91	−1·04	13·130	1·404	+ ·089	−84 7 53·88	− ·72	12·792	1·483	+ ·081	41 : 143	11·68 : 8·95	3924
808	5·7	Apodis......κ^1	20 36·583	+ ·002	6·4371	·2073	− ·0003	−73 2 33·58	+ ·18	12·868	·726	− ·023	19 : 20	7·93 : 7·86	3925
809	5·5	9 Serpentis......τ^1	21 9·060	+ ·012	2·7804	·0040	− ·0014	+15 46 46·07	+ ·22	12·835	·317	− ·026	17 : 18	8·50 : 8·46	3931
810	6·0	32 Libræ	22 36·929	− ·010	3·3770	·0148	+ ·0011	−16 22 4·90	+ ·38	12·753	·386	− ·043	20 : 21	8·95 : 8·92	3935
811	3·7	3 Coronæ Borealis...β	15 23 42·232	+ ·094	+ 2·4732	+ ·0019	− ·0133	+29 27 1·94	− ·54	−12·560	+ ·284	+ ·076	26 : 27	7·08 : 7·05	3940
812	4·2	Trianguli Aust. ....ε	27 33·946	− ·025	5·4355	·1126	+ ·0034	−65 58 50·64	+ ·52	12·444	·629	− ·072	24 : 25	7·25 : 7·19	3947
813†	2·8	Lupi......m. γ	28 28·506	+ ·010	3·9824	·0330	− ·0014	−40 49 50·07	+ ·26	12·345	·463	− ·036	18	7·30	3950
814	4·3	4 Coronæ Borealis....θ	28 53·770	+ ·016	2·4180	·0020	− ·0020	+31 41 47·40	+ ·21	12·306	·284	− ·026	17	8·11	3953
815	4·1	38 Libræ......γ	29 55·896	− ·037	3·3501	·0136	+ ·0045	−14 27 22·02	+ ·01	12·210	·393	− ·001	38 : 35	8·24 : 8·07	3959
816	2·2	5 Coronæ Borealis...α	15 30 27·259	− ·071	+ 2·5391	+ ·0024	+ ·0090	+27 3 2·82	+ ·81	−12·274	+ ·300	− ·102	18	7·94	3961
817	3·7	Scorpii 3 H.........	30 57·109	+ ·005	3·6325	·0209	− ·0007	−27 48 14·04	+ ·04	12·143	·427	− ·005	17	7·77	3962
818	4·3	Lupi......ω	31 18·743	+ ·117	4·0249	·0341	− ·0144	−42 14 20·31	− ·50	12·051	·471	+ ·061	16	8·15	3964
819	5·5	Lacaille 6437.........	31 23·435	+ ·032	4·4342	·0513	− ·0036	−52 2 34·13	+ ·37	12·149	·520	− ·042	17	8·90	3965
820	6·3	Lacaille 6470.........	35 22·911	+ ·019	4·3183	·0445	− ·0027	−49 10 3·51	+ ·24	11·860	·513	− ·033	31 : 32	7·21 : 7·17	3987
821	5·1	43 Libræ......κ	15 36 10·983	+ ·027	+ 3·4492	+ ·0157	− ·0032	−19 21 18·21	+ ·99	−11·889	+ ·412	− ·119	19	8·30	3990
822†	4·6	21 Serpentis......m. ι	37 5·455	+ ·042	2·6725	·0036	− ·0051	+19 59 31·82	+ ·45	11·761	·321	− ·055	20	8·26	3994
823†	3·8	8 Coronæ Borealis m. γ	38 32·506	+ ·057	2·5188	·0026	− ·0075	+26 36 44·82	− ·23	11·572	·303	+ ·030	22	7·57	3998
824	2·7	24 Serpentis......α	39 20·582	− ·075	2·9522	·0061	+ ·0090	+ 6 44 24·56	− ·31	11·508	·358	+ ·038	23 : 22	8·36 : 8·28	4001
825	3·5	28 Serpentis......β	41 34·347	− ·040	2·7673	·0043	+ ·0049	+15 44 4·18	+ ·46	11·442	·338	− ·057	22	8·11	4009
826	4·2	35 Serpentis......κ	15 44 14·238	+ ·025	+ 2·6992	+ ·0039	− ·0032	+18 27 0·30	+ ·77	−11·294	+ ·331	− ·101	20	7·91 : 7·66	4015
827	3·4	32 Serpentis......μ	44 23·988	+ ·055	3·1270	·0088	− ·0059	− 3 7 27·96	+ ·26	11·209	·382	− ·028	26	9·25 : 9·28	4016
828*	4·1	5 Lupi......χ	44 36·142	+ ·006	3·8014	·0237	− ·0007	−33 19 21·66	+ ·24	11·194	·465	− ·028	18	8·63	4018
829	3·7	37 Serpentis ......ε	45 49·887	− ·068	2·9875	·0065	+ ·0083	+ 4 46 43·25	− ·48	11·020	·369	+ ·057	20 : 21	8·20 : 8·49	4026
830	2·8	Trianguli Aust. ....β	46 19·468	+ ·215	5·2436	·0872	− ·0296	−63 7 21·80	+ 2·79	11·429	·639	− ·388	22 : 23	7·26 : 7·19	4030
831	5·1	45 Libræ......λ	15 47 31·656	+ ·008	+ 3·4758	+ ·0151	− ·0010	−19 52 5·75	+ ·28	−10·987	+ ·429	− ·034	23	8·30	4033
832	4·0	5 Scorpii......ρ	50 42·498	+ ·007	3·6954	·0199	− ·0010	−28 55 19·57	+ ·22	10·749	·460	− ·030	32 : 33	7·43 : 7·38	4052
833	3·8	41 Serpentis......γ	51 50·176	− ·178	2·7688	·0057	+ ·0210	+15 59 5·48	+10·79	11·933	·349	−1·297	27	8·46 : 8·32	4055
834	2·9	6 Scorpii ......π	52 48·045	+ ·009	3·6210	·0178	− ·0011	−25 49 34·66	+ ·30	10·600	·453	− ·036	20	8·23	4062
835†	4·2	13 Coronæ Bor....seq. ε	53 26·745	+ ·048	2·4820	·0031	− ·0064	+27 10 2·14	+ ·50	10·584	·312	− ·068	24 : 25	7·43 : 7·35	4063
836	2·3	7 Scorpii ......δ	15 54 25·134	+ ·007	+ 3·5402	+ ·0158	− ·0009	−22 20 14·07	+ ·30	−10·482	+ ·445	− ·039	31 : 26	8·31 : 7·67	4066
837	5·7	49 Libræ......	54 42·433	+ ·356	3·3609	·0133	− ·0440	−16 14 23·29	+ 3·23	10·821	·418	− ·400	22	8·08	4067
838	5·4	5 Herculis......τ	56 44·643	+ ·030	2·6936	·0038	− ·0037	+18 5 41·60	− 1·19	10·125	·341	+ ·144	24	8·23	4075
839	4·8	Normæ......δ	59 25·323	− ·001	4·2242	·0331	+ ·0001	−44 54 6·25	− ·13	10·050	·537	+ ·017	28 : 29	7·35 : 7·45	4084
840†	2·6	8 Scorpii......pr. β	15 59 37·267	+ ·007	3·4817	·0141	− ·0008	−19 31 55·01	+ ·25	10·081	·443	− ·029	35 : 32	8·84 : 8·52	4086
841	4·4	Lupi ......θ	16 0 1·454	+ ·013	+ 3·9281	+ ·0244	− ·0017	−36 31 48·41	+ ·27	−10·057	+ ·500	− ·035	18 : 19	7·89 : 7·84	4091
842	4·5	10 Scorpii ......ω^2	1 32·375	− ·023	3·5120	·0145	+ ·0030	−20 35 55·31	+ ·43	9·963	·450	− ·056	30 : 31	7·59 : 7·61	4095
843	5·1	7 Herculis ......κ	3 33·655	+ ·025	2·7053	·0041	− ·0031	+17 18 47·40	+ ·11	9·768	·348	− ·014	22 : 23	8·13 : 8·17	4101
844	6·2	Lacaille 6715	4 28·516	+ ·074	4·0744	·0278	− ·0100	−40 51 17·91	+ ·95	9·811	·523	− ·129	29 : 30	7·44 : 7·39	4105
845	4·9	Apodis ......δ^1	5 23·566	+ ·056	8·8018	·3371	− ·0062	−78 26 38·10	+ ·34	9·650	1·129	− ·037	33	9·06	4109
846	5·2	Normæ ......κ	16 5 35·351	+ ·013	+ 4·7080	+ ·0479	− ·0016	−54 22 18·18	+ ·35	− 9·640	+ ·606	− ·043	21 : 22	8·19 : 8·13	4111
847	4·8	13 Scorpii ......c^1	6 8·510	+ ·018	3·6862	·0175	− ·0021	−27 40 1·19	+ ·33	9·593	·476	− ·038	17	8·70	4115
848	4·1	Trianguli Aust.....δ	6 19·976	− ·003	5·4231	·0783	+ ·0004	−63 25 48·36	+ ·14	9·558	·700	− ·018	18	7·56	4118
849	2·7	1 Ophiuchi ......δ	9 6·240	+ ·026	3·1401	·0082	− ·0033	− 3 26 14·29	+ 1·17	9·479	·409	− ·153	41 : 43	7·91 : 7·65	4134
850†	5·7	Normæ......m. λ	12 19·984	+ ·007	4·1607	·0278	− ·0009	−42 25 44·65	+ ·14	9·094	·544	− ·019	24 : 26	7·26 : 7·15	4144

813. 3·5, 3·7 0″·5 96° 1901·0.
822. 5·4, 5·4 0″·3 67° 1903·5.
823. 3·9, 6·9; very close binary.
828. λ in Auwers' Bradley.

835. 4·2, 12 2″·0 352° 1905·4.
840. 2·6, 10 1″·1 95° 1901·4.
850. 6·1, 6·9 0″·4 152° 1897·2.

No.	Mag.	Name.	Mean R.A. 1900·0.	$\mu_\alpha\Delta$E.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	Mean Dec. 1900·0.	$\mu_\delta\Delta$E.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	No. of Obs.	Epoch 1900+.	Boss No.
			h m s	s	s	s	s	° ′ ″	″	″	″	″			
851	4·1	Normæ......γ^2	16 12 21·211	+ ·146	+ 4·4701	+ ·0373	−·0180	−49 54 37·25	+ ·43	− 9·126	+ ·583	− ·053	21 : 22	8·10 : 8·02	4145
852	3·1	2 Ophiuchi......ϵ	13 1·807	− ·045	3·1705	·0081	+·0053	− 4 26 55·71	− ·27	8·989	·417	+ ·032	23	8·48 : 8·29	4147
853	7·0	Lacaille 6783......	14 5·569	+ ·007	4·3976	·0341	−·0009	−47 56 52·22	+ ·28	8·972	·578	− ·034	17 : 19	8·22 : 8·16	4153
854	5·6	Lacaille 6790......	14 59·520	+ ·008	4·4664	·0358	−·0011	−49 20 0·65	+ ·23	8·898	·588	− ·031	21 : 24	7·53 : 7·41	4156
855	3·0	20 Scorpii......σ	15 6·517	+ ·007	3·6395	·0154	−·0009	−25 21 10·57	+ ·24	8·890	·480	− ·032	25	7·65	4158
856	4·9	50 Serpentis......σ	16 17 0·356	+ ·089	+ 3·0347	+ ·0066	−·0111	+ 1 15 50·34	− ·35	− 8·666	+ ·401	+ ·043	16	8·05	4163
857	5·5	Lacaille 6810......	17 14·874	− ·054	4·0534	·0237	+·0072	−38 57 32·83	+ ·14	8·709	·537	− ·019	22 : 23	7·52 : 7·39	4164
858	3·7	20 Herculis......γ	17 30·466	+ ·030	2·6449	·0038	−·0034	+19 23 16·33	− ·34	8·630	·351	+ ·039	23 : 24	8·86 : 8·74	4165
859	5·1	Trianguli Aust......ζ	17 42·841	− ·330	6·3990	·1158	+·0397	−69 51 31·13	− ·83	8·553	·851	+ ·100	18	8·31	4166
860	3·8	Apodis......γ	18 5·732	+ ·336	9·0554	·3205	−·0400	−78 40 21·55	+ ·64	8·699	1·190	− ·077	34 : 35	8·40 : 8·34	4168
861	4·9	19 Coronæ Borealis...ξ	16 18 11·939	+ ·069	+ 2·3363	+ ·0030	−·0074	+31 7 27·29	− ·85	− 8·522	+ ·310	+ ·092	17	9·27	4169
862	6·5	23 Herculis......	19 6·128	− ·010	2·3012	·0032	+·0010	+32 33 58·14	+ ·17	8·561	·307	− ·018	16	9·56	4176
863†	4·6	24 Herculis......*seq.* ω	20 48·033	− ·022	2·7669	·0045	+·0030	+14 15 47·59	+ ·47	8·474	·370	− ·065	23 : 24	7·30 : 7·26	4182
864	5·4	Lacaille 6824......	21 55·992	+ ·010	5·3024	·0616	−·0013	−61 24 43·28	+ ·02	8·322	·707	− ·003	19 : 20	7·84 : 7·75	4185
865	5·6	Lacaille 6841......	22 27·479	+ ·013	4·3323	·0295	−·0015	−46 1 16·54	+ ·08	8·287	·578	− ·010	19	8·40	4190
866	6·6	Lacaille 6441......	16 22 50·86	...	+29·826	+ 4·962	...	−87 23 34·64	...	− 8·246	+3·967	...	31 : 42	11·52 : 10·31	...
867†	0·8	21 Scorpii......*seq.* α	23 16·486	+ ·004	3·6720	·0149	−·0005	−26 12 36·74	+ ·28	8·245	·492	− ·033	20	8·34	4193
868	6·3	Lacaille 6545......	23 34·91	− ·08	21·343	2·353	+·007	−86 10 42·85	+ ·01	8·189	2·845	− ·001	47 : 157	11·51 : 8·68	4196
869	4·4	Scorpii......N	24 50·787	+ ·006	3·9117	·0192	−·0007	−34 29 11·63	+ ·20	8·110	·525	− ·024	16	8·46	4200
870†	4·0	10 Ophiuchi......*m.* λ	25 52·151	+ ·028	3·0220	·0063	−·0032	+ 2 12 8·97	+ ·74	8·088	·407	− ·084	18 : 17	8·83	4203
871	2·6	27 Herculis......β	16 25 55·160	+ ·071	+ 2·5770	+ ·0036	−·0075	+21 42 26·29	+ ·23	− 8·024	+ ·347	− ·024	17 : 16	9·50 : 9·45	4204
872	5·2	Normæ......μ	26 58·550	− ·009	4·2523	·0261	+·0011	−43 49 59·96	+ ·08	7·924	·573	− ·009	17	8·46	4208
873	4·2	Apodis......β	28 46·616	+ ·710	8·4547	·2440	−·0880	−77 18 31·67	+ 2·80	8·115	1·128	− ·346	40 : 41	8·07 : 8·10	4215
874	2·8	23 Scorpii......τ	29 39·347	+ ·007	3·7279	·0150	−·0008	−28 0 31·18	+ ·30	7·736	·505	− ·037	19 : 21	8·30 : 8·22	4218
875	2·5	13 Ophiuchi......ζ	31 39·098	− ·006	3·2996	·0086	+·0008	−10 21 52·70	− ·13	7·521	·449	+ ·017	22 : 21	7·89 : 7·82	4225
876	5·2	24 Scorpii......	16 35 47·285	+ ·014	+ 3·4651	+ ·0103	−·0017	−17 32 55·47	+ ·06	− 7·208	+ ·474	− ·007	22	8·38	4239
877†	2·8	40 Herculis......*m.* ζ	37 30·644	+ ·298	2·2608	·0027	−·0365	+31 47 5·03	− 3·16	6·675	·306	+ ·385	22 : 20	8·16 : 8·22	4246
878	1·7	Trianguli Aust......α	38 4·425	− ·025	6·3107	·0889	+·0032	−68 50 38·83	+ ·20	7·042	·865	− ·027	18 : 20	7·74 : 7·56	4250
879	7·0	Lacaille 6953......	38 46·457	− ·002	4·3863	·0258	+·0002	−46 20 46·63	+ ·33	6·998	·603	− ·041	19 : 21	8·25 : 8·08	4252
880	3·7	Aræ......η	41 8·922	− ·033	5·1593	·0447	+·0044	−58 51 46·07	+ ·33	6·807	·712	− ·045	28 : 30	7·59 : 7·40	4265
881	7·9*	Gilliss P.Z. 11448...	16 41 16·69	...	+66·525	+21·427	...	−88 51 49·91	...	− 6·751	+9·134	...	35 : 45	11·43 : 10·58	...
882	7·1	18 Ophiuchi......	43 39·119	+ ·007	3·6461	·0118	−·0009	−24 27 54·21	+ ·19	6·578	·505	− ·023	17 : 18	8·15 : 8·13	4271
883	2·1	26 Scorpii......ϵ	43 40·780	+ ·374	3·8783	·0161	−·0496	−34 6 44·07	+ 1·97	6·811	·530	− ·258	24 : 25	7·55 : 7·65	4272
884	4·8	20 Ophiuchi......	44 18·102	− ·048	3·3149	·0080	+·0058	−10 36 23·34	+ ·85	6·604	·461	− ·102	17	8·29	4273
885	3·1	Scorpii......μ^1	45 5·721	+ ·005	4·0562	·0177	−·0006	−37 52 32·99	+ ·26	6·466	·563	− ·030	19 : 20	8·87 : 8·68	4277
886	5·7	47 Herculis......k	16 45 28·032	− ·032	+ 2·9109	+ ·0048	+·0035	+ 7 25 12·51	+ ·07	− 6·413	+ ·405	− ·008	16	9·26	4280
887	6·7	49 Herculis......	47 31·660	− ·005	2·7292	·0039	+·0006	+15 8 30·85	+ ·06	6·241	·381	− ·007	44 : 39	8·49 : 8·14	4291
888	3·5	Scorpii......ζ^2	47 32·632	+ ·089	4·2128	·0204	−·0109	−42 11 25·77	+ 1·93	6·470	·585	− ·237	14 : 15	8·18 : 8·13	4292
889	6·8	Lacaille 7024......	48 25·946	+ ·018	4·6140	·0274	−·0019	−50 30 44·78	+ ·23	6·184	·642	− ·025	16 : 18	9·49 : 9·29	4296
890	5·6	53 Herculis......	49 10·378	+ ·071	2·2734	·0033	−·0075	+31 52 1·18	+ ·22	6·120	·317	− ·023	16	9·45	4300
891	4·3	25 Ophiuchi......ι	16 49 16·505	+ ·034	+ 2·8365	+ ·0044	−·0038	+10 19 47·17	+ ·41	− 6·134	+ ·396	− ·046	16 : 17	8·90 : 8·86	4302
892	3·0	Aræ......ζ	50 20·560	+ ·021	4·9483	·0342	−·0027	−55 49 55·90	+ ·32	6·041	·690	− ·041	22 : 23	7·93 : 7·84	4304
893†	5·7	24 Ophiuchi......*m.*...	50 46·086	+ ·004	3·6132	·0104	−·0005	−22 59 29·74	+ ·03	5·968	·505	− ·004	19 : 21	8·49 : 8·22	4309
894	4·1	Aræ......ϵ^1	51 36·712	+ ·004	4·7675	·0293	−·0004	−53 0 23·26	− ·01	5·893	·667	+ ·001	19	8·81	4313
895	3·2	27 Ophiuchi......κ	52 55·908	+ ·156	2·8376	·0043	−·0199	+ 9 31 49·12	+ ·10	5·797	·396	− ·014	26 : 29	7·85 : 7·45	4315
896	5·3	Lacaille 7089......	16 55 24·570	+ ·007	+ 3·8734	+ ·0130	−·0009	−31 59 41·95	+ ·47	− 5·637	+ ·545	− ·062	23 : 25	7·83 : 7·66	4321
897	5·1	30 Ophiuchi......	55 47·132	+ ·031	3·1602	·0060	−·0036	− 4 4 22·62	+ ·76	5·632	·444	− ·088	21	8·60	4323
898	3·8	58 Herculis......ϵ	56 27·730	+ ·031	2·2941	·0031	−·0036	+31 4 24·74	− ·18	5·466	·323	+ ·021	17 : 20	8·56 : 8·36	4328
899	5·4	59 Herculis......d	16 57 54·828	·000	2·2131	·0032	·0000	+33 42 46·61	+ ·10	5·376	·313	− ·012	19	8·42	4332
900	4·9	60 Herculis......	17 0 44·464	− ·027	2·7805	·0038	+·0036	+12 52 40·77	+ ·13	5·143	·394	− ·017	30 : 31	7·58 : 7·50	4346

863. 4·6, 12   2″·0   182°   1901·5.
867. 0·8, 7·1   3″·2   274°   1903·4.
870. 4·2, 6·3; close binary.
877. 2·8, 6·3; close binary.
893. 6·4, 6·6   0″·6   276°   1904·5.

No.	Mag.	Name.	Mean R.A. 1900·0.	$\mu_\alpha\Delta$E.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	Mean Dec. 1900·0.	$\mu_\delta\Delta$E.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	No. of Obs.	Epoch 1900+.	Boss No.
			h m s	s	s	s	s	° ′ ″	″	″	″	″			
901†	2·4	35 Ophiuchi ....m. η	17 4 38·571	− ·021	+ 3·4372	+ ·0071	+ ·0025	−15 36 3·60	− ·68	− 4·709	+ ·489	+ ·086	25	8·45 : 7·96	4360
902	3·3	Scorpii .... η	4 59·394	− ·017	4·2896	·0169	+ ·0022	−43 6 28·51	+ 2·30	5·060	·610	− ·294	24	7·84	4361
903	7·7	C.G.A. 23027........	6 3·75	..	30·594	2·782	...	−87 17 47·18	...	4·674	4·341	...	31 : 41	11·43 : 10·59	...
904	5·7	Lacaille 7202.........	10 33·219	+ ·060	3·8979	·0106	− ·0077	−32 32 59·99	+ ·43	4·347	·556	− ·055	22	7·78	4375
905	3·1	65 Herculis .... δ	10 55·384	+ ·016	2·4628	·0033	− ·0018	+24 57 23·75	+ 1·43	4·423	·352	− ·163	15 : 16	9·01 : 8·78	4376
906	5·8	Apodis.................. ι	17 10 56·518	+ ·020	+ 6·6614	+ ·0614	− ·0025	−70 1 4·51	+ ·14	− 4·276	+ ·950	− ·017	18	7·98	4377
907	6·1	Lacaille 7088.........	12 45	...	11·1208	·2378	+ ·0017	−80 45 58·67	+ ·33	4·147	1·589	− ·043	3	7·58	4387
908†	var.	68 Herculis ....pr. u	13 37·846	+ ·014	2·2138	·0031	− ·0016	+33 12 27·87	+ ·11	4·041	·318	− ·013	20	8·82	4388
909	4·5	40 Ophiuchi............ ξ	15 0·716	− ·130	3·5928	·0074	+ ·0171	−21 0 22·29	+ 1·56	4·117	·518	− ·207	25 : 26	7·62 : 7·52	4394
910	3·2	42 Ophiuchi .... θ	15 52·047	+ ·001	3·6811	·0078	− ·0001	−24 53 59·49	+ ·29	3·867	·528	− ·031	27 : 26	9·60 : 9·37	4399
911	5·5	72 Herculis .... w	17 16 55·097	− ·086	+ 2·2427	+ ·0048	+ ·0099	+32 35 37·77	+ 9·13	− 4·799	+ ·324	−1·053	16	8·67	4403
912	5·3	Lacaille 7247.........	16 58·089	+ ·018	4·3410	·0136	− ·0022	−44 3 59·62	+ ·27	3·774	·623	− ·032	19	8·32	4404
913	2·7	Aræ.................... β	16 59·146	+ ·015	4·9763	·0217	− ·0018	−55 26 7·08	+ ·27	3·773	·714	− ·033	18 : 19	8·25 : 8·05	4406
914	4·2	44 Ophiuchi...............	20 15·762	+ ·004	3·6603	·0073	− ·0005	−24 5 1·21	+ 1·05	3·590	·527	− ·132	27 : 28	8·02 : 7·93	4420
915	4·3	45 Ophiuchi .... d	20 58·087	− ·012	3·8274	·0083	+ ·0014	−29 46 36·66	+ 1·30	3·554	·552	− ·156	22 : 21	8·42 : 8·33	4421
916	4·5	49 Ophiuchi .... σ	17 21 33·156	− ·002	+ 2·9751	+ ·0037	+ ·0002	+ 4 13 37·38	− ·03	− 3·344	+ ·429	+ ·003	21 : 19	9·77 : 9·58	4425
917	3·6	Aræ.................... δ	22 4·131	+ ·061	5·4042	·0254	− ·0076	−60 36 1·46	+ ·68	3·388	·778	− ·085	17	8·02	4426
918	2·7	34 Scorpii.............. υ	23 57·894	+ ·002	4·0746	·0094	− ·0002	−37 12 57·67	+ ·35	3·181	·588	− ·042	18	8·39	4429
919	2·7	Aræ.................... α	24 6·625	+ ·029	4·6309	·0146	− ·0034	−49 47 48·87	+ ·71	3·210	·668	− ·084	21	8·40	4431
920	4·9	51 Ophiuchi...............	25 18·827	− ·001	3·6575	·0064	+ ·0001	−23 53 7·68	+ ·32	3·060	·528	− ·038	18 : 19	8·59 : 8·55	4434
921	4·7	76 Herculis .... λ	17 26 41·790	− ·010	+ 2·4232	+ ·0028	+ ·0011	+26 11 9·38	− ·12	− 2·889	+ ·351	+ ·014	16	8·78	4438
922	1·5	35 Scorpii.............. λ	26 49·086	+ ·002	4·0697	·0087	− ·0003	−37 1 51·25	+ ·28	2·928	·588	− ·036	20	7·91	4439
923	4·7	Aræ.................... σ	28 12·784	+ ·033	4·4602	·0114	− ·0039	−46 26 12·04	+ ·33	2·811	·645	− ·039	21 : 22	8·38 : 8·34	4445
924	5·4	Aræ.................... π	29 52·721	+ ·022	4·9225	·0154	− ·0027	−54 26 0·62	+ 1·22	2·778	·712	− ·151	17	8·10	4454
925	6·6	Lacaille 7078.........	29 59·79	+ ·29	18·747	·538	− ·026	−85 10 35·89	+ 1·39	2·748	2·707	− ·131	33 : 46	11·45 : 10·60	4456
926	1·8	Scorpii .... θ	17 30 7·985	− ·003	+ 4·3056	+ ·0096	+ ·0004	−42 56 2·70	+ ·10	− 2·616	+ ·624	− ·011	17 : 18	8·74 : 8·72	4457
927	2·0	55 Ophiuchi .... α	30 17·623	− ·077	2·7833	·0033	+ ·0080	+12 37 55·18	+ 2·24	2·826	·405	− ·235	19 : 18	9·64 : 9·53	4459
928	3·4	55 Serpentis .... ξ	31 51·579	+ ·028	3·4331	·0046	− ·0030	−15 20 9·20	+ ·65	2·526	·497	− ·071	19 : 17	9·43 : 9·21	4462
929	5·0	Aræ.................... λ	32 40·450	− ·085	4·6291	·0116	+ ·0111	−49 21 14·69	+ 1·38	2·564	·673	− ·179	20	7·69	4466
930	2·4	Scorpii................ κ	35 34·173	+ ·007	4·1467	·0072	− ·0009	−38 58 42·48	+ ·21	2·159	·602	− ·026	20	8·26	4474
931	4·4	56 Serpentis............ o	17 35 47·590	+ ·043	+ 3·3700	+ ·0040	− ·0048	−12 49 19·65	+ ·50	− 2·170	+ ·489	− ·056	16	9·00	4475
932	3·5	Pavonis................ η	35 55·007	+ ·012	5·8797	·0211	− ·0013	−64 40 33·41	+ ·50	2·158	·853	− ·055	16 : 17	9·20 : 9·11	4476
933	5·3	Aræ.................... μ	36 12·221	+ ·014	4·7589	·0114	− ·0015	−51 46 52·20	+ 1·90	2·279	·691	− ·201	16	9·47	4478
934	2·9	60 Ophiuchi............ β	38 31·918	+ ·024	2·9623	·0027	− ·0028	+ 4 36 33·19	− 1·30	1·724	·430	+ ·152	33	8·53 : 8·55	4487
935	3·0	Scorpii................ ι¹	40 35·416	− ·002	4·1935	·0062	+ ·0003	−40 5 17·52	− ·02	1·694	·610	+ ·002	19	7·83	4492
936	var.	3 Sagittarii ....(X.)	17 41 15·935	+ ·003	+ 3·7740	+ ·0045	− ·0004	−27 47 33·85	+ ·18	− 1·659	+ ·549	− ·022	18	8·03	4493
937	3·4	86 Herculis.............. μ	42 32·416	+ ·229	2·3460	·0038	− ·0244	+27 46 37·64	+ 7·04	2·276	·338	− ·750	16	9·39	4497
938	3·8	62 Ophiuchi............ γ	42 52·674	+ ·015	3·0067	·0029	− ·0018	+ 2 44 40·30	+ ·67	1·575	·437	− ·079	17	8·50	4500
939	3·1	Scorpii................ G	43 3·156	− ·049	4·0825	·0051	+ ·0054	−37 0 40·59	− ·18	1·461	·595	+ ·020	17	9·08	4501
940	5·0	Scorpii................ ι²	43 11·479	− ·004	4·1934	·0056	+ ·0004	−40 3 29·12	+ ·13	1·483	·610	− ·014	17	9·22	4503
941	5·3	87 Herculis.................	17 44 45·801	+ ·007	+ 2·4310	+ ·0025	− ·0008	+25 39 21·00	+ ·41	− 1·377	+ ·354	− ·045	17	9·17	4508
942	6·6	Mayer 722.............	50 2·038	− ·010	3·5276	·0028	+ ·0011	−18 47 4·87	+ ·19	0·892	·514	− ·021	16	8·92	4521
943	5·0	Lacaille 7497.........	50 41·405	+ ·012	4·2607	·0039	− ·0015	−41 42 6·91	+ ·23	0·842	·621	− ·028	23	8·08	4525
944	5·8	89 Herculis.................	51 23·086	− ·001	2·4192	·0023	+ ·0001	+26 3 57·03	− ·02	0·751	·353	+ ·002	16	9·26	4528
945	3·4	64 Ophiuchi............ ν	53 31·271	+ ·007	3·3014	·0025	− ·0008	− 9 45 42·24	+ ·95	0·685	·481	− ·118	26 : 25	8·27 : 8·03	4536
946	4·0	92 Herculis............ ξ	17 53 52·768	− ·057	+ 2·3305	+ ·0023	+ ·0066	+29 15 30·60	+ ·23	− 0·562	+ ·341	− ·027	17	8·67	4538
947	4·0	67 Ophiuchi................	55 38·190	− ·001	3·0039	·0021	+ ·0001	+ 2 56 10·27	+ ·14	0·396	·438	− ·014	25 : 24	9·79 : 9·74	4548
948	5·4	Octantis............ χ	56 3·50	+1·07	35·738	·369	− ·096	−87 39 52·48	+ 1·12	0·474	5·197	− ·131	38 : 147	11·42 : 8·45	4550
949	5·8	Lacaille 7473	57 16·398	+ ·013	8·3886	·0119	− ·0015	−75 53 39·90	+ 2·37	0·504	1·223	− ·266	17	8·92	4558
950	3·8	Aræ.................... θ	58 50·782	+ ·011	4·6694	·0018	− ·0012	−50 5 52·35	+ ·26	0·129	·680	− ·028	16 : 17	9·24 : 9·18	4565

901. 2·9, 3·4 0″·5 245° 1905·5.
908. Var. 10 4″·5 60° 1898·4.
908. L, 4·8–5·3; P, 2ᵈ·05.
936. L, 4·4–5·0; P, 7ᵈ·01.

No.	Mag.	Name.	Mean R.A. 1900.0.	$\mu_\alpha\Delta$E.	Annual Variation 1900.0.	Sec. Var. 1900.0.	Proper Motion.	Mean Dec. 1900.0.	$\mu_\delta\Delta$E.	Annual Variation 1900.0.	Sec. Var. 1900.0.	Proper Motion.	No. of Obs.	Epoch 1900+.	Boss No.
			h m s	s	s	s	s	° ′ ″	″	″	″	″			
951	4.4	Pavonis ... π	17 58 57.159	− .024	+ 5.7755	+ .0028	+ .0024	−63 40 22.32	+ 1.90	− 0.283	+ .842	− .191	16	9.95	4566
952	2.8	10 Sagittarii ... γ	17 59 23.023	+ .043	3.8526	.0020	− .0046	−30 25 32.94	+ 1.83	− 0.248	.561	− .194	16 : 17	9.43	4568
953.	3.7	72 Ophiuchi ...	18 2 36.493	+ .037	2.8433	.0018	− .0042	+ 9 32 58.66	− .71	+ 0.310	.414	+ .082	17 : 18	8.73 : 8.65	4581
954	3.8	103 Herculis ... o	3 38.475	− .002	2.3395	.0021	+ .0002	+28 44 55.13	− .02	0.320	.341	+ .002	16 : 18	9.44 : 9.42	4584
955	4.7	Telescopii ... ε	3 48.402	+ .014	4.4531	.0002	− .0016	−45 58 18.36	+ .32	0.296	.649	− .037	16	8.60	4588
956	4.4	102 Herculis ...	18 4 28.872	+ .001	+ 2.5647	+ .0020	− .0001	+20 47 54.64	+ .16	+ 0.375	+ .374	− .017	16	9.51	4590
957	4.0	13 Sagittarii ... μ	7 46.985	− .003	3.5876	+ .0007	+ .0003	−21 5 6.47	+ .05	0.676	.522	− .005	29	9.15 : 9.00	4604
958	5.5	Lacaille 7621 ...	8 35.616	− .048	4.3782	− .0012	+ .0055	−44 14 11.62	− .17	0.770	.638	+ .019	18 : 19	8.69	4610
959	5.6	Lacaille 7608 ...	8 42.088	+ .045	5.0517	.0032	− .0047	−56 3 15.95	+ .25	0.735	.735	− .026	16	9.52	4611
960	8.1	Brisbane 6229 ...	10 21.65	...	23.530	.303	...	−86 15 57.90	...	0.906	3.426	...	29 : 37	11.39 : 10.58	...
961†	3.0	Sagittarii ... pr. η	18 10 51.583	+ .095	+ 4.0592	− .0006	− .0115	−36 47 31.44	+ 1.37	+ 0.783	+ .589	− .167	20 : 22	8.30 : 8.21	4617
962†	4.3	Pavonis ... pr. ξ	14 0.661	+ .008	5.5322	.0088	− .0010	−61 32 21.21	− .07	1.233	.804	+ .008	18 : 19	8.41 : 8.32	4625
963	2.7	19 Sagittarii ... δ	14 35.569	− .026	3.8412	− .0009	+ .0028	−29 52 14.41	+ .34	1.240	.558	− .036	17	9.40	4628
964	3.3	58 Serpentis ... η	16 7.789	+ .343	3.1029	+ .0017	− .0376	− 2 55 36.24	+ 6.32	0.711	.445	− .699	23 : 21	9.12 : 9.04	4638
965	1.7	20 Sagittarii ... ε	17 32.106	+ .030	3.9823	− .0018	− .0035	−34 25 55.76	+ 1.11	1.400	.578	− .132	17 : 18	8.50 : 8.39	4645
966	5.9	Bradley 2308 ...	18 17 58.464	− .010	+ 2.5015	+ .0016	+ .0011	+23 14 4.40	− .71	+ 1.646	+ .363	+ .075	16	9.42	4649
967	5.4	B.D. + 17° 3555 ...	18 23.920	− .043	2.6497	.0015	+ .0045	+17 46 33.92	− .07	1.615	.385	+ .007	16	9.60	4651
968	4.0	109 Herculis ...	19 26.310	− .129	2.5556	+ .0021	+ .0138	+21 43 24.42	+ 2.47	1.437	.372	− .261	22 : 23	9.34 : 9.45	4656
969	3.6	Telescopii ... α	19 33.549	+ .009	4.4514	− .0047	− .0010	−46 1 24.77	+ .46	1.657	.646	− .052	17 : 18	8.75	4657
970	6.0	Lacaille 7642 ...	20 4.988	− .013	7.7250	.0359	+ .0014	−74 1 38.98	+ 1.11	1.634	1.121	− .120	16 : 17	9.37 : 9.26	4658
971	4.2	Telescopii ... ζ	18 21 7.840	− .135	+ 4.6247	− .0056	+ .0147	−49 7 31.28	+ 2.36	+ 1.589	+ .673	− .257	16	9.19	4662
972	2.7	22 Sagittarii ... λ	21 47.939	+ .033	3.7028	.0012	− .0035	−25 28 39.03	+ 1.84	1.713	.536	− .191	22 : 23	9.51 : 9.64	4665
973	4.7	Scuti 2 H. ...	23 29.890	− .002	3.4196	.0006	+ .0002	−14 37 46.87	+ .07	2.044	.495	− .008	17	8.65	4674
974	8.3	Lacaille 7442 ...	23 58.40	...	20.601	− .517	...	−85 39 49.08	...	2.093	2.986	...	30 : 38	11.43 : 10.72	...
975	5.6	60 Serpentis ... c	24 28.760	− .014	3.1214	+ .0004	+ .0015	− 2 3 0.76	+ .28	2.106	.452	− .031	16	9.00	4678
976	4.6	Coronæ Aust. ... θ	18 26 21.761	− .029	+ 4.2875	− .0057	+ .0035	−42 23 4.14	+ .23	+ 2.274	+ .620	− .027	21	8.41	4689
977	4.0	Scuti 3 H. ...	29 45.922	+ .013	3.2645	.0001	− .0015	− 8 18 53.40	+ 2.67	2.279	.471	− .317	21	8.42	4705
978	4.1	Pavonis ... ζ	31 21.210	+ .021	7.0302	.0429	− .0022	−71 30 51.06	+ 1.48	2.579	1.014	− .155	16	9.53	4709
979	6.1	Lacaille 7780 ...	31 40.297	− .012	4.5436	.0095	+ .0013	−47 59 45.43	− .22	2.785	.655	+ .024	17	9.21	4710
980	5.9	Bradley 2333 ...	32 25.803	+ .006	3.6495	.0027	− .0006	−23 35 25.11	+ .27	2.798	.525	− .029	16	9.41	4718
981	6.1	Bradley 2335 ...	18 32 55.595	+ .053	+ 3.5781	− .0022	− .0055	−21 8 6.09	+ 1.48	+ 2.717	+ .514	− .154	16 : 17	9.63	4720
982	4.8	Scuti 4 H. ...	36 47.936	− .008	3.2856	.0012	+ .0009	− 9 8 53.87	+ .04	3.201	.471	− .004	22	9.19 : 9.29	4731
983	5.2	Coronæ Aust. ... λ	36 55.383	− .003	4.1190	.0069	+ .0004	−38 25 10.94	+ .52	3.157	.591	− .059	16	8.73	4732
984	3.2	27 Sagittarii ... φ	39 24.599	− .033	3.7496	− .0044	+ .0036	−27 5 36.98	+ .03	3.427	.538	− .003	22 : 21	9.11 : 9.08	4739
985	4.3	110 Herculis ...	41 21.451	+ .014	2.5806	+ .0016	− .0015	+20 26 58.67	+ 3.28	3.254	.368	− .344	17	9.54	4753
986	5.7	Coronæ Aust. ... η^1	18 41 37.532	− .024	+ 4.3350	− .0104	+ .0026	−43 47 19.78	+ .15	+ 3.605	+ .620	− .016	16	9.18	4755
987	4.5	Scuti 6 H. ...	41 52.122	+ .007	3.1833	− .0010	− .0007	− 4 51 18.13	+ .22	3.619	.455	− .023	16	9.55	4756
988	4.3	111 Herculis ...	42 36.322	− .042	2.6482	+ .0008	+ .0044	+18 4 13.17	− 1.01	3.811	.378	+ .106	16	9.55	4761
989	4.3	Pavonis ... λ	42 57.141	+ .022	5.5713	− .0294	− .0023	−62 18 7.38	+ .11	3.724	.796	− .011	16	9.76	4762
990	6.5	30 Sagittarii ...	44 49.818	+ .023	3.6067	.0040	− .0027	−22 16 36.38	+ .21	3.872	.514	− .024	17 : 16	8.66 : 8.63	4767
991	6.7	Lacaille 7881 ...	18 45 7.956	+ .014	+ 4.2437	− .0103	− .0015	−41 49 33.18	+ .22	+ 3.899	+ .605	− .023	16	9.43	4769
992	var.	10 Lyræ ... pr. β	46 23.242	− .003	2.2144	+ .0014	+ .0003	+33 14 47.34	+ .07	4.023	.315	− .007	16	9.86	4776
993	2.0	34 Sagittarii ... σ	49 3.933	− .005	3.7218	− .0055	+ .0006	−26 25 15.86	+ .57	4.193	.528	− .066	19	8.70	4784
994	5.0	Telescopii ... λ	50 27.855	− .019	4.8094	.0202	+ .0020	−53 4 10.21	− .13	4.393	.683	+ .014	17	9.57	4796
995	4.8	63 Serpentis ... pr. θ	51 14.946	− .030	2.9826	.0005	+ .0031	+ 4 4 24.27	− .26	4.472	.422	+ .027	17 : 16	9.52 : 9.49	4802
996	3.5	37 Sagittarii ... ξ	18 51 45.905	− .023	+ 3.5808	− .0046	+ .0023	−21 14 17.60	+ .18	+ 4.471	+ .507	− .018	22	10.09 : 10.17	4809
997	5.1	Coronæ Aust. ... ε	51 58.638	+ .095	4.0512	− .0096	− .0109	−37 14 16.81	+ .81	4.415	.572	− .093	16	8.73	4810
998	4.2	13 Aquilæ ... ε	55 5.001	+ .043	2.7218	+ .0006	− .0044	+14 55 55.57	+ .74	4.695	.383	− .077	20	9.70 : 9.64	4823
999	3.2	14 Lyræ ... γ	55 12.128	+ .002	2.2436	+ .0013	− .0002	+32 33 8.14	+ .06	4.775	.316	− .007	16	9.09	4824
1000†	2.7	38 Sagittarii ... m. ζ	56 14.984	+ .015	3.8199	− .0078	− .0016	−30 1 23.29	.00	4.871	.538	.000	16	9.41	4832

961. 3.0, 10.3   3″.9,   105°   1897.4.
962. 4.3, 10.0   3″.1   151°   1895.7.
992. L, 3.4–4.1 ; P, 12^{d}.91.
1000. 3.4, 3.6 ; very close binary.

No.	Mag.	Name.	Mean R.A. 1900·0.	$\mu_\alpha\Delta$E.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	Mean Dec. 1900·0.	$\mu_\delta\Delta$E.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	No. of Obs.	Epoch 1900+.	Boss No.
			h m s	s	s	s	s	° ′ ″	″	″	″	″			
1001	5·3	Telescopii……ρ	18 58 25·003	− ·023	+ 4·7597	− ·0222	+·0027	−52 29 15·82	+ 1·02	+ 4·937	+ ·670	− ·118	17	8·63	4844
1002	5·5	Octantis……σ	18 59 45·56	−1·23	102·437	38·819	+·109	−89 15 16·89	+ ·08	5·157	14·445	− ·009	61 : 102	11·31 : 9·66	4854
1003	7·9	Lacaille 7751……	19 0 28·72	…	17·519	·915	…	−84 53 47·81	…	5·229	2·463	…	35 : 43	11·39 : 10·69	…
1004	3·3	40 Sagittarii……τ	0 41·819	+ ·042	3·7484	− ·0072	−·0045	−27 49 2·21	+ 2·45	4·987	·525	− ·260	17 : 18	9·35 : 9·44	4857
1005†	3·0	17 Aquilæ……pr. ζ	0 48·821	+ ·006	2·7570	+ ·0004	−·0006	+13 42 51·74	+ 1·00	5·155	·386	− ·102	17	9·84 : 9·80	4858
1006	3·4	16 Aquilæ……λ	19 0 56·530	+ ·016	+ 3·1842	− ·0021	−·0017	− 5 1 58·61	+ ·86	+ 5·178	+ ·446	− ·090	18 : 16	9·61 : 9·57	4859
1007	4·2	Coronæ Aust.……α	2 40·277	− ·067	4·0873	− ·0122	+·0074	−38 3 37·47	+ ·95	5·309	·572	− ·105	16	9·02	4868
1008†	5·3	17 Lyræ……seq.	3 38·732	− ·094	2·2680	+ ·0012	+·0095	+32 20 38·53	− ·13	5·509	·317	+ ·013	16	9·85	4872
1009	5·3	18 Lyræ……ι	3 43·963	+ ·006	2·1400	+ ·0012	−·0006	+35 56 35·63	+ ·06	5·497	·298	− ·006	16 : 17	9·79 : 9·81	4873
1010	3·0	41 Sagittarii……π	3 49·055	+ ·004	3·5699	− ·0059	−·0004	−21 10 58·24	+ ·39	5·470	·498	− ·040	17 : 18	9·60 : 9·66	4874
1011†	5·6	Lacaille 7997 m……	19 7 8·823	− ·002	+ 6·0626	− ·0624	+·0002	−66 50 0·52	− ·02	+ 5·792	+ ·844	+ ·002	16	9·59	4882
1012	6·0	Lacaille 8029……	7 23·253	− ·054	4·3677	− ·0184	+·006*	−45 21 44·55	+ ·63	5·810	·607	− ·07*	17	9·04	…
1013	6·0	19 Lyræ……	7 55·847	+ ·009	2·2999	+ ·0012	−·0009	+31 6 59·04	+ ·07	5·848	·318	− ·007	16	9·56	4885
1014	5·3	21 Aquilæ……	8 40·192	+ ·002	3·0248	− ·0015	−·0002	+ 2 7 24·50	+ ·06	5·911	·419	− ·006	16	9·89	4887
1015	5·1	42 Sagittarii……ψ	9 24·616	− ·030	3·6818	·0079	+·0030	−25 25 45·19	+ ·35	5·944	·510	− ·035	21	9·92 : 9·90	4891
1016	5·6	22 Aquilæ……	19 11 34·085	− ·006	+ 2·9693	− ·0012	+·0006	+ 4 39 29·42	+ ·13	+ 6·145	+ ·409	− ·014	16	9·36	4902
1017	5·0	43 Sagittarii……d	11 47·088	+ ·009	3·5125	·0062	−·0009	−19 7 51·77	+ ·18	6·158	·484	− ·019	16	9·68	4903
1018	7·0	Lacaille 8050……	11 49·957	− ·017	4·6870	·0264	+·0018	−51 45 8·20	+ ·45	6·134	·648	− ·047	17	9·59	4904
1019	8·9*	Gilliss P.Z. 13504…	12 27·73	…	40·647	7·010	…	−88 3 49·89	…	6·233	5·629	…	12 : 13	11·38 : 11·44	…
1020	5·3	25 Aquilæ……ω	13 7·357	+ ·001	2·8160	·0004	−·0001	+11 24 53·87	− ·10	6·299	·387	+ ·011	20 : 19	9·34 : 9·16	4914
1021	4·0	Sagittarii……β^1	19 15 27·013	+ ·001	+ 4·3214	− ·0199	−·0001	−44 38 48·53	+ ·17	+ 6·462	+ ·594	− ·019	16	9·14	4929
1022	4·1	Sagittarii……α	16 57·576	− ·023	4·1644	·0169	+·0025	−40 48 15·77	+ 1·18	6·480	·571	− ·126	16	9·37	4936
1023†	5·7	Lacaille 8091….br…	19 46·294	+ ·054	4·8295	·0337	−·0057	−54 31 28·89	− ·14	6·853	·658	+ ·015	16	9·53	4946
1024	5·4	31 Aquilæ……b	20 12·578	− ·468	2·8611	·0012	+·0494	+11 43 54·96	− 5·97	7·503	·395	+ ·630	16	9·47	4950
1025	3·4	30 Aquilæ……δ	20 27·580	− ·163	3·0253	·0019	+·0169	+ 2 54 55·43	− ·74	6·971	·414	+ ·077	17 : 16	9·65	4953
1026	5·8	Lacaille 8107……	19 20 37·376	− ·009	+ 3·7959	− ·0112	+·0009	−29 56 28·07	+ ·55	+ 6·853	+ ·517	− ·055	16	10·09	4955
1027	6·4	Bradley 2459……	21 17·326	+ ·137	2·4813	+ ·0017	−·0137	+24 43 49·43	+ 6·31	6·331	·334	− ·631	16	10·00	4961
1028	5·8	5 Vulpeculæ……	21 51·238	+ ·005	2·6186	·0005	−·0005	+19 53 56·22	+ ·37	6·970	·354	− ·039	16	9·45	4965
1029	4·6	6 Vulpeculæ……	24 32·540	+ ·083	2·4959	+ ·0010	−·0093	+24 27 43·44	+ 1·01	7·115	·335	− ·113	17	8·95	4976
1030	5·3	36 Aquilæ……e	25 26·073	− ·006	3·1381	− ·0031	+·0006	− 2 59 50·81	+ ·12	7·288	·423	− ·013	16	9·49	4983
1031	6·0	Lacaille 8129……	19 26 9·206	+ ·022	+ 4·3343	− ·0233	−·0023	−45 29 1·08	+ ·32	+ 7·327	+ ·584	− ·033	16	9·69	4984
1032	3·0	6 Cygni……pr. β	26 41·293	+ ·002	2·4187	+ ·0010	−·0002	+27 44 58·22	+ ·08	7·394	·324	− ·009	17	9·14	4986
1033	5·0	Telescopii……ι	27 47·929	+ ·024	4·4619	− ·0270	−·0025	−48 18 53·64	+ ·36	7·455	·600	− ·038	16	9·46	4991
1034	4·8	8 Cygni……	28 3·295	+ ·002	2·2288	+ ·0011	−·0002	+34 14 24·62	+ ·03	7·511	·298	− ·003	16 : 17	9·98 : 9·99	4992
1035	4·8	38 Aquilæ……μ	29 12·399	− ·137	2·9312	− ·0012	+·0143	+ 7 9 57·80	+ 1·45	7·455	·394	− ·152	24 : 23	9·56 : 9·53	4995
1036	5·1	39 Aquilæ……κ	19 31 30·721	− ·002	+ 3·2292	− ·0045	+·0002	− 7 14 59·85	+ ·02	+ 7·792	+ ·430	− ·002	16	8·76	5003
1037	5·8	4 Sagittæ……ε	32 45·790	− ·009	2·7156	·0001	+·0010	+16 14 16·86	− ·12	7·907	·361	+ ·013	17	9·39	5010
1038	5·2	44 Aquilæ……σ	34 15·520	+ ·001	2·9614	·0018	−·0001	+ 5 10 11·05	·00	8·014	·392	·000	16	9·02	5018
1039	5·5	54 Sagittarii……	34 59·761	− ·045	3·4398	− ·0074	+·0046	−16 31 21·66	+ ·51	8·019	·456	− ·054	25 : 21	9·73 : 9·43	5019
1040	4·5	6 Sagittæ……β	36 33·456	− ·001	2·6939	+ ·0001	+·0001	+17 14 38·91	+ ·35	8·160	·355	− ·038	16	9·27	5027
1041	5·2	55 Sagittarii……e	19 36 48·043	− ·039	+ 3·4344	− ·0076	+·0042	−16 21 30·51	+ ·16	+ 8·201	+ ·454	− ·017	17 : 16	9·23 : 9·25	5028
1042	6·7	Lacaille 8094……	37 37·07	− ·01	11·3154	·5390	+·0009	−81 36 0·60	− ·09	8·293	1·499	+ ·011	52 : 141	11·39 : 8·51	5030
1043	5·6	Lacaille 8156……	37 53·525	− ·012	6·9902	− ·1464	+·0012	−72 44 50·09	− ·19	8·325	·924	+ ·020	16 : 17	9·68 : 9·65	5034
1044	5·6	10 Vulpeculæ……	39 33·398	− ·004	2·4936	+ ·0009	+·0004	+25 31 57·10	− ·12	8·450	·326	+ ·013	16	9·50	5039
1045	5·7	Lacaille 8211……	39 38·474	+ ·005	3·8337	− ·0152	−·0005	−32 8 59·30	+ ·27	8·416	·503	− ·028	16	9·64	5040
1046	5·5	Telescopii……ν	19 39 51·437	− ·105	+ 4·9205	− ·0454	+·0105	−56 36 11·61	+ 1·49	+ 8·312	+ ·648	− ·149	17 : 18	9·99	5041
1047	5·1	56 Sagittarii……f	40 31·692	+ ·090	3·5033	·0091	−·0095	−20 0 6·78	+ ·91	8·418	·457	− ·096	16 : 18	9·48 : 9·52	5044
1048	2·8	50 Aquilæ……γ	41 30·361	− ·008	2·8523	− ·0011	+·0009	+10 22 9·92	+ ·04	8·587	·372	− ·004	18	9·01	5047
1049	3·8	7 Sagittæ……δ	42 55·731	− ·001	2·6746	+ ·0001	+·0001	+18 17 14·64	− ·08	8·713	·348	+ ·009	20	9·41	5052
1050	5·6	Lacaille 8239……	45 3·239	− ·022	4·0851	− ·0222	+·0025	−40 7 40·49	+ ·22	8·847	·530	− ·024	17	8·97	5060

1005. 3·0, 13 6″·0 59° 1898·6.
1008. 5·3, 9·4 3″·7 315° 1905·7.
1011. 5·8, 7·8 0″·8 40° 1901·8.
1023. 5·7, 10·0; close binary.

No.	Mag.	Name.	Mean R.A. 1900·0.	$\mu_\alpha \Delta E$.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	Mean Dec. 1900·0.	$\mu_\delta \Delta E$.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	No. of Obs.	Epoch 1900+.	Boss No.
			h m s	s	s	s	s	° ′ ″	″	″	″	″			
1051	0·6	53 Aquilæ..............α	19 45 54·613	− ·339	+ 2·9274	− ·0018	+·0361	+ 8 36 18·27	− 3·57	+ 9·317	+ ·383	+ ·380	16	9·40	5062
1052	6·3	Lacaille 8226....	45 56·745	− ·028	5·2717	·0638	+·0028	−61 25 43·97	− ·15	8·956	·684	+ ·015	16 : 17	9·87 : 9·79	5064
1053	var.	55 Aquilæ..............η	47 22·758	− ·005	3·0573	·0032	+·0005	+ 0 44 55·63	+ ·08	9·043	·394	− ·009	16	9·17	5071
1054	4·1	Sagittarii..............ι	48 21·887	− ·007	4·1494	·0249	+·0008	−42 7 50·79	− ·48	9·181	·535	+ ·052	18 : 19	9·18 : 9·22	5078
1055	4·0	Pavonis..............ε	49 1·985	− ·148	7·0172	·1646	+·0162	−73 10 29·10	+ 1·21	9·049	·908	− ·132	16 : 17	9·16	5084
1056	3·8	60 Aquilæ.......... ...β	19 50 24·119	− ·023	+ 2·9469	− ·0015	+·0023	+ 6 9 19·62	+ 4·81	+ 8·805	+ ·377	− ·483	23 : 22	9·86 : 9·95	5093
1057	5·4	61 Aquilæ..............φ	51 30·127	− ·012	2·8406	·0011	+·0013	+11 9 29·12	− ·08	9·381	·362	+ ·008	17 : 18	9·50 : 9·44	5099
1058	5·1	61 Sagittarii...........g	52 16·802	− ·004	3·4055	·0084	+·0004	−15 45 25·83	+ ·83	9·343	·434	− ·090	16 : 17	9·19	5101
1059	4·4	Sagittarii.. .... ..θ¹	53 13·756	− ·012	3·9144	− ·0195	+·0013	−35 32 47·98	+ ·42	9·462	·499	− ·044	17 : 18	9·45	5108
1060	3·7	12 Sagittæ . ...γ	54 18·630	− ·040	2·6674	+ ·0002	+·0042	+19 13 13·63	− ·15	9·605	·338	+ ·016	20 : 22	9·51 : 9·47	5118
1061	5·8	63 Sagittarii........... ...	19 56 22·563	− ·020	+ 3·3639	− ·0081	+·0022	−13 54 51·39	− ·18	+ 9·767	+ ·425	+ ·019	16 : 18	9·26 : 9·23	5128
1062	4·6	62 Sagittarii...... c	56 30·661	− ·026	3·6955	− ·0148	+·0027	−27 59 16·19	− ·10	9·768	·467	+ ·010	17	9·67	5129
1063	4·9	15 Vulpeculæ......... ...	56 58·970	− ·039	2·4698	+ ·0012	+·0039	+27 28 37·40	− ·06	9·800	·310	+ ·006	16	9·95	5132
1064	6·9	Mayer 837..	57 48·775	+ ·025	3·5606	− ·0121	−·0027	−22 52 34·82	− ·23	9·882	·448	+ ·025	18 : 20	9·14 : 9·02	5135
1065	3·6	Pavonis..............δ	58 57·017	−1·882	5·9258	·0933	+·1924	−66 26 23·71	+11·21	8·795	·772	−1·146	16	9·78	5138
1066	5·9	63 Aquilæ... . ...τ	19 59 15·285	− ·008	+ 2·9309	− ·0020	+·0009	+ 6 59 44·43	− ·20	+ 9·988	+ ·367	+ ·021	16	9·29	5143
1067	5·1	Telescopii...........ξ	19 59 43·575	+ ·026	4·6160	·0443	−·0027	−53 10 0·96	+ ·01	10·002	·579	− ·001	16 : 17	9·60	5147
1068	6·3	Lacaille 8202..........	20 3 33·	...	13·327	1·060	−·001	−83 37 7·77	+ ·01	10·290	1·663	− ·002	4	7·28	N 1306
1069	3·2	65 Aquilæ......... . ...θ	6 8·784	− ·020	3·0967	− ·0042	+·0021	− 1 7 5·86	− ·03	10·488	·381	+ ·003	30 : 24	9·50 : 9·02	5171
1070	6·0	20 Vulpeculæ............	7 49·073	+ ·003	2·5146	+ ·0012	−·0003	+26 10 48·18	+ ·15	10·594	·307	− ·016	17	9·19	5178
1071	5·7	66 Aquilæ.....	20 8 4·099	− ·011	+ 3·0994	− ·0043	+·0012	− 1 18 33·21	+ ·22	+10·604	+ ·378	− ·024	16	9·09	5179
1072	5·0	67 Aquilæ...............ρ	9 39·021	− ·033	2·7759	·0005	+·0036	+14 53 34·57	− ·47	10·796	·337	+ ·051	17	9·19	5182
1073	4·5	5 Capricorni.... . ...α¹	12 6·390	− ·009	3·3283	·0085	+·0010	−12 49 2·61	− ·06	10·932	·402	+ ·006	17 : 16	9·21	5197
1074	6·1	4 Capricorni..	12 8·999	− ·021	3·5300	− ·0128	+·0023	−22 7 8·43	+ ·31	10·895	·427	− ·034	18	9·24	5198
1075	5·7	24 Vulpeculæ	12 30·319	− ·013	2·5668	+ ·0011	+·0013	+24 21 46·45	+ ·19	10·935	·309	− ·020	16	9·62	5201
1076†	3·7	6 Capricorni..........α²	20 12 30·494	− ·041	+ 3·3318	− ·0085	+·0040	−12 51 17·73	− ·05	+10·961	+ ·403	+ ·005	22 : 20	10·13 : 10·02	5202
1077	6·7	Lacaille 8400.........	14 25·102	+ ·371	4·3721	·0408	−·0413	−50 18 31·25	+ 2·32	10·837	·521	− ·258	17	8·99	5209
1078	3·2	9 Capricorni.......... β	15 23·679	− ·023	3·3742	·0096	+·0024	−15 5 50·45	− ·01	11·167	·404	+ ·001	20 : 18	9·48 : 9·22	5216
1079	5·8	Sagittarii......... . κ¹	15 40·290	− ·055	4·0897	·0297	+·0059	−42 21 53·54	+ ·97	11·082	·491	− ·104	16	9·29	5217
1080	1·8	Pavonis...... . .....α	17 44·350	− ·005	4·7738	·0595	+·0005	−57 3 20·55	+ ·79	11·250	·569	− ·086	17	9·17	5223
1081	7·1	Lacaille 8257..........	20 18 48·31	− ·35	+15·054	− 1·640	+·031	−84 44 49·40	− ·29	+11·445	+1·803	+ ·033	49 : 165	11·39 : 8·81	N 1326
1082	6·2	Bradley 3256	19 19·558	− ·008	3·6810	·0177	+·0009	−28 59 15·50	− ·05	11·455	·436	+ ·005	16	9·28	5232
1083	5·1	69 Aquilæ	24 25·493	− ·038	3·1373	− ·0054	+·0042	− 3 13 6·02	+ ·19	11·792	·365	− ·021	16	9·07	5254
1084	4·1	41 Cygni..................	25 18·571	− ·006	2·4505	+ ·0020	+·0007	+30 2 5·02	+ ·04	11·872	·283	− ·004	16	9·06	5255
1085	5·3	Microscopii ....ν	27 2·884	− ·011	4·1389	− ·0349	+·0013	−44 51 18·50	+ ·36	11·957	·478	− ·041	17 : 18	8·84 : 8·78	5266
1086	4·8	Pavonis.......... . φ¹	20 27 18·192	− ·067	+ 5·0029	− ·0771	+·0071	−60 55 8·00	+ 1·59	+11·848	+ ·579	− ·168	16	9·49	5268
1087	4·1	2 Delphini.... ....ε	28 26·154	− ·006	2·8665	·0013	+·0006	+10 57 47·37	+ ·25	12·069	·328	− ·026	28 : 20	9·98 : 9·78	5272
1088	5·0	Pavonis ....ρ	29 12·484	− ·063	5·0678	·0828	+·0067	−61 52 25·27	+ ·59	12·086	·583	− ·063	16	9·43	5274
1089	6·3	Octantis............μ¹	29 42·495	− ·453	7·5576	·3031	+·0540	−76 31 49·96	+ ·07	12·175	·876	− ·008	45 : 46	8·38	5277
1090	3·1	Indi ....α	30 32·204	− ·040	4·2369	·0402	+·0039	−47 38 23·80	− ·61	12·302	·484	+ ·061	16 : 17	10·13 : 9·92	5281
1091	4·7	4 Delphini............ζ	20 30 38·030	− ·025	+ 2·8047	− ·0005	+·0026	+14 19 45·12	− ·04	+12·252	+ ·319	+ ·004	16	9·59	5282
1092†	3·7	6 Delphini....... .m. β	32 51·668	− ·067	2·8131	− ·0004	+·0074	+14 14 49·46	+ ·33	12·364	·318	− ·037	23 : 21	9·01 : 8·88	5291
1093	4·8	29 Vulpeculæ	34 3·374	− ·038	2·6782	+ ·0010	+·0041	+20 51 0·31	+ ·01	12·482	·301	− ·001	16	9·29	5301
1094	5·7	Lacaille 8517	34 3·554	− ·030	3·7751	− ·0229	+·0031	−33 47 7·70	− ·07	12·490	·426	+ ·007	16	9·83	5302
1095	5·3	7 Delphini....... .....κ	34 16·577	− ·220	2·9144	·0016	+·0213	+ 9 44 1·72	− ·12	12·510	·329	+ ·012	16	10·35	5304
1096	5·4	15 Capricorni...... ....υ	20 34 21·491	+ ·020	+ 3·4197	− ·0122	−·0020	−18 29 27·18	+ ·21	+12·483	+ ·384	− ·021	18 : 17	10·03	5306
1097	3·9	9 Delphini............α	34 59·053	− ·013	2·7865	·0001	+·0044	+15 33 32·93	+ ·08	12·539	·312	− ·008	16	9·67	5310
1098	3·4	Pavonis...... .... . β	35 56·977	+ ·072	5·4607	·1163	−·0079	−66 33 44·27	− ·12	12·625	·613	+ ·013	18	9·14	5315
1099	4·7	Indi......... ....η	36 42·084	− ·141	4·4271	·0508	+·0153	−52 16 41·81	+ ·42	12·615	·497	− ·048	15 . 17	9·23 : 8·85	5318
1100	4·5	11 Delphini............δ	38 47·424	+ ·014	2·8007	·0002	−·0016	+14 42 56·15	+ ·45	12·754	·308	− ·051	17 : 18	8·74 : 8·78	5323

1053. L, 3·6–4·2; P, $7^{d}·18$.
1076. BC = 10·6 7″·8 152° 1897·6.
1092. 4·0, 5·3; very close binary.

No.	Mag.	Name.	Mean R.A. 1900·0.	$\mu_\alpha \Delta$E.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	Mean Dec. 1900·0.	$\mu_\delta \Delta$E.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	No. of Obs.	Epoch 1900+.	Boss No.
			h m s	s	s	s	s	° ′ ″	″	″	″	″			
1101	4·2	16 Capricorni ψ	20 40 10·540	+ ·038	+ 3·5590	− ·0167	− ·0042	−25 37 50·75	+ 1·44	+12·739	+ ·391	− ·159	17 : 18	9·13 : 9·03	5328
1102	5·3	Microscopii ι	41 42·681	− ·142	4·0826	− ·0362	+ ·0156	−44 21 11·55	+ ·87	12·903	·449	− ·097	16	9·13 : 8·97	5332
1103	4·4	12 Delphini γ	42 1·112	+ ·022	2·7832	+ ·0002	− ·0023	+15 45 47·69	+ 2·00	12·817	·302	− ·204	16	9·78	5335
1104	2·5	53 Cygni ε	42 10·166	− ·292	2·4265	+ ·0028	+ ·0288	+33 35 47·36	− 3·27	13·352	·267	+ ·322	16	10·15	5336
1105	3·8	2 Aquarii ε	42 15·856	− ·019	3·2507	− ·0084	+ ·0019	− 9 51 43·45	+ ·34	13·003	·354	− ·034	18 : 17	10·04 : 10·00	5337
1106	4·6	3 Aquarii	20 42 27·721	+ ·004	+ 3·1676	− ·0065	− ·0004	− 5 23 38·77	+ ·39	+13·011	+ ·345	− ·039	16	10·05	5338
1107	5·3	Indi ι	44 16·409	− ·004	4·3616	·0512	+ ·0005	−51 58 49·70	+ ·32	13·133	·474	− ·037	17 : 18	8·77	5354
1108	4·1	18 Capricorni ω	45 51·313	+ ·006	3·5885	·0184	− ·0006	−27 17 36·03	+ ·13	13·260	·386	− ·014	16 : 17	9·49 : 9·45	5363
1109	3·6	Indi β	46 59·868	− ·014	4·7223	·0734	+ ·0015	−58 49 53·15	+ ·24	13·323	·508	− ·026	17 : 18	9·43 : 9·37	5367
1110	5·6	Lacaille 8606	47 9·945	− ·037	3·9179	·0308	+ ·0040	−40 11 3·83	+ ·91	13·264	·420	− ·096	16 : 18	9·37 : 9·49	5369
1111	4·8	6 Aquarii μ	20 47 15·711	− ·025	+ 3·2390	− ·0083	+ ·0025	− 9 21 31·48	+ ·35	+13·331	+ ·346	− ·035	23 : 17	10·02 : 9·92	5371
1112	6·1	19 Capricorni	49 8·854	+ ·035	3·3956	− ·0128	− ·0038	−18 18 8·28	+ ·17	13·469	·360	− ·019	16 : 17	9·17 : 9·15	5374
1113	5·3	32 Vulpeculæ	50 17·858	+ ·006	2·5554	+ ·0026	− ·0007	+27 40 37·75	+ ·02	13·561	·268	− ·002	23 : 20	9·09 : 8·82	5379
1114	5·3	Octantis α	52 36·552	+ ·024	7·4332	− ·3501	− ·0028	−77 24 21·52	+ 3·07	13·349	·784	− ·362	33 : 34	8·48 : 8·47	5390
1115	6·0	Lacaille 8624	53 14·650	+ ·086	4·2920	·0519	− ·0098	−51 39 24·95	− 1·08	13·878	·448	+ ·127	19	8·74 : 8·47	5391
1116	7·0	C.G.A. 28663	20 53 43·67	...	+15·699	− 2·472	...	−85 36 17·00	...	+13·782	+1·656	...	56 : 69	11·40 : 10·53	...
1117*	4·8	Microscopii γ	55 9·559	− ·005	3·6911	·0235	+ ·0006	−32 38 55·12	− ·04	13·877	·383	+ ·004	17	9·06	5402
1118	5·5	Microscopii ζ	56 34·681	+ ·014	3·8478	·0302	− ·0017	−39 1 19·82	+ ·99	13·842	·396	− ·120	19	8·23	5411
1119	7·4	C.G.A. 28714	57 18·07	...	16·919	3·036	...	−86 3 0·95	...	14·007	1·759	...	58 : 68	11·39 : 10·68	...
1120	5·0	22 Capricorni η	20 58 42·888	+ ·028	3·4199	·0142	− ·0030	−20 15 2·33	+ ·40	14·052	·348	− ·043	17	9·22	5417
1121	4·1	23 Capricorni θ	21 0 19·695	− ·054	+ 3·3779	− ·0128	+ ·0057	−17 37 49·70	+ ·62	+14·129	+ ·342	− ·066	22 : 17	9·55 : 9·33	5427
1122	7·0	Lacaille 8678	0 59·161	− ·031	4·1714	·0474	+ ·0036	−49 20 25·23	+ ·26	14·206	·422	− ·030	18	8·66	5429
1123	4·6	24 Capricorni A	1 16·804	+ ·019	3·5165	·0178	− ·0022	−25 24 20·82	+ ·45	14·203	·354	− ·051	18	8·77	5430
1124	5·3	Pavonis ο	3 58·140	− ·044	5·7043	·1704	+ ·0049	−70 32 2·98	+ ·30	14·384	·572	− ·034	17 : 18	9·04 : 8·89	5439
1125	4·6	13 Aquarii ν	4 8·933	− ·057	3·2721	·0098	+ ·0063	−11 46 36·35	+ ·11	14·417	·326	− ·013	23	9·03 : 8·62	5441
1126†	4·7	5 Equulei seq. γ	21 5 28·783	− ·033	+ 2·9178	− ·0011	+ ·0036	+ 9 43 41·61	+ 1·49	+14·349	+ ·288	− ·161	17	9·26	5443
1127	5·7	3 Piscis Aust.	7 21·728	− ·065	3·5661	·0200	+ ·0071	−28 1 39·34	+ 1·27	14·485	·350	− ·138	16	9·21	544
1128	6·0	Lacaille 8727	8 37·501	− ·009	4·3094	− ·0588	+ ·0009	−53 40 36·58	+ ·41	14·657	·421	− ·043	16	9·55	545
1129	3·3	64 Cygni ζ	8 40·762	+ ·002	2·5515	+ ·0040	− ·0002	+29 48 59·40	+ ·57	14·643	·247	− ·059	16	9·60	545
1130	6·4	Lacaille 8551	10 33·56	...	13·882	− 2·138	...	−85 14 17·64	...	14·813	1·358	...	58 : 71	11·40 : 10·72	...
1131	4·0	8 Equulei α	21 10 49·580	− ·038	+ 3·0001	− ·0027	+ ·0038	+ 4 50 2·44	+ ·86	+14·742	+ ·289	− ·087	18 : 16	9·99 : 9·90	5461
1132	7·0	Lacaille 8743	11 3·981	+ ·031	4·1073	·0476	− ·0033	−49 8 2·11	+ ·80	14·757	·396	− ·086	16	9·32	5463
1133*	4·8	Microscopii ε	11 52·598	− ·042	3·6488	− ·0243	+ ·0045	−32 35 26·03	+ ·31	14·856	·350	− ·034	16	9·25	5464
1134	4·4	66 Cygni υ	13 48·325	− ·015	2·4653	+ ·0050	+ ·0016	+34 28 37·07	+ ·19	14·982	·232	− ·021	18 : 17	9·26	5471
1135	5·0	Microscopii θ^1	14 22·048	− ·062	3·8546	− ·0345	+ ·0075	−41 13 56·22	·00	15·035	·366	·000	19	8·28	5473
1136	4·3	32 Capricorni ι	21 16 40·818	− ·022	+ 3·3460	− ·0130	+ ·0022	−17 15 38·08	− ·06	+15·174	+ ·313	+ ·006	27 : 20	9·89 : 9·53	5484
1137	4·3	1 Pegasi	17 27·769	− ·065	2·7734	+ ·0019	+ ·0072	+19 22 36·20	− ·52	15·271	·258	+ ·058	17 : 18	9·06 : 8·97	5489
1138†	6·1	Microscopii m. θ^2	18 2·448	− ·020	3·8405	− ·0349	+ ·0022	−41 26 6·87	− ·03	15·249	·357	+ ·003	17	9·16	5492
1139	4·3	Pavonis γ	18 10·893	− ·130	5·0170	·1241	+ ·0134	−65 48 59·53	− 7·69	16·065	·469	+ ·811	16 : 17	9·67 : 9·48	5493
1140	6·4	Indi γ	19 7·620	+ ·001	4·3089	·0642	− ·0001	−55 5 31·93	− ·38	15·349	·399	+ ·041	16	9·24	5497
1141†	5·8	Lacaille 8809 pr.	21 20 36·812	+ ·050	+ 3·8645	− ·0373	− ·0058	−42 58 50·98	− ·06	+15·398	+ ·354	+ ·007	18 : 19	8·68 : 8·59	5506
1142	3·8	34 Capricorni ζ	20 57·571	·000	3·4325	·0166	·0000	−22 50 40·04	− ·22	15·434	·313	+ ·023	21 : 23	9·77 : 9·76	5507
1143	4·6	36 Capricorni b	23 1·482	− ·086	3·4276	·0163	+ ·0095	−22 14 34·09	+ ·07	15·517	·310	− ·008	19	9·09	5513
1144	2·9	22 Aquarii β	26 17·765	− ·010	3·1608	·0071	+ ·0010	− 6 0 40·49	+ ·07	15·698	·280	− ·007	21 : 23	9·54 : 9·75	5527
1145	5·8	Lacaille 8838	26 54·832	+ ·020	3·9063	·0413	− ·0023	−45 17 26·45	+ ·11	15·726	·346	− ·012	18	8·77	5530
1146	6·5	Lacaille 8842	21 30 4·180	− ·021	+ 4·8407	− ·1158	+ ·0025	−65 16 18·22	+ ·03	+15·905	+ ·423	− ·003	19 : 20	8·44 : 8·37	5541
1147	3·7	Octantis ν	30 21·968	− ·122	6·8523	·3826	+ ·0140	−77 50 3·64	+ 2·01	15·694	·602	− ·230	37 : 38	8·73 : 8·76	5544
1148	4·8	23 Aquarii ξ	32 25·841	− ·072	3·1969	·0082	+ ·0075	− 8 18 10·43	+ ·23	16·009	·274	− ·024	16 : 18	9·55 : 9·62	5551
1149	7·7	Lacaille 8751	33 6·97	...	11·251	1·557	...	−84 25 10·82	...	16·069	·974	...	51 : 63	11·42 : 10·65	...
1150	6·7	Lacaille 8720	34 16·18	...	13·149	2·314	...	−85 29 46·51	...	16·129	1·132	...	53 : 65	11·42 : 10·68	...

1117. 1 Piscis Australis in Auwers' Bradley.
1126. 4·7, 11   2″·2   272°   1901·6.
1133. 4 Piscis Australis in Auwers' Bradley.
1138. 6·4, 7·6   1″·0   292°   1900·8.
1141. 5·8, 8·8   2″·9   146°   1900·6.

No.	Mag.	Name.	Mean R.A. 1900·0.	$\mu_\alpha\Delta$E.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	Mean Dec. 1900·0.	$\mu_\delta\Delta$E.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	No. of Obs.	Epoch 1900+.	Boss No.
			h m s	s	s	s	s	° ′ ″	″	″	″	″			
1151	3·7	40 Capricorni ....γ	21 34 33·216	− ·117	+ 3·3294	− ·0131	+·0131	−17 6 50·98	+ ·18	+16·123	+ ·282	− ·021	19 : 20	8·93 : 8·65	5562
1152	5·4	41 Capricorni	36 19·233	− ·057	3·4235	·0174	+·0067	−23 42 55·75	+ ·79	16·142	·286	− ·093	20	8·49	5568
1153	4·8	43 Capricorni...........κ	37 4·642	− ·093	3·3560	·0145	+·0100	−19 19 19·83	+ ·07	16·266	·279	− ·007	17	9·29	5570
1154	6·7	Octantis............B	37 41·30	− ·25	68·391	88·544	+·017	−89 19 3·92	+ ·41	16·263	5·799	− ·041	67 : 115	11·45 : 10·03	5576
1155	4·4	9 Piscis Aust. ....ι	38 59·562	− ·024	3·5855	·0259	+·0029	−33 28 56·42	+ ·72	16·285	·295	− ·086	20	8·37	5582
1156	2·4	8 Pegasi ....ε	21 39 16·514	− ·016	+ 2·9464	− ·0005	+·0017	+ 9 24 59·06	+ ·01	+16·384	+ ·240	− ·001	17	9·49	5584
1157†	4·2	10 Pegasi ....m. κ	40 6·996	− ·023	2·7145	+ ·0047	+·0024	+25 11 7·04	− ·02	16·429	·220	+ ·002	16	9·42	5592
1158	5·6	48 Capricorni ....λ	41 9·212	− ·014	3·2333	− ·0100	+·0016	−11 49 37·93	+ ·10	16·468	·261	− ·011	18 : 19	8·88 : 8·77	5596
1159	2·8	49 Capricorni...........δ	41 31·552	− ·170	3·3163	·0125	+·0179	−16 34 54·74	+ 2·80	16·202	·269	− ·295	21 : 20	9·51 : 9·50	5600
1160	5·8	Lacaille 8912.........	41 45·794	− ·133	3·9215	·0461	+·0144	−47 45 33·56	+ 2·84	16·202	·318	− ·307	17	9·24	5601
1161	5·6	Indi....................ο	21 42 19·812	+ ·080	+ 5·1500	− ·1651	−·0084	−70 5 40·69	·00	+16·538	+ ·417	·000	16	9·57	5607
1162	5·3	14 Pegasi....	45 25·235	− ·018	2·6518	+ ·0064	+·0020	+29 42 30·20	+ ·25	16·662	·207	− ·027	19	9·23	5617
1163	5·3	51 Capricorni...........μ	47 50·925	− ·195	3·2754	− ·0112	+·0211	−14 1 21·12	− ·08	16·814	·255	+ ·009	16	9·24	5623
1164	3·1	Gruis ....γ	47 52·644	− ·080	3·6474	− ·0310	+·0093	−37 50 6·80	+ ·15	16·790	·283	− ·017	19	8·63	5624
1165	5·1	16 Pegasi	48 30·695	− ·001	2·7272	+ ·0053	+·0001	+25 27 16·07	− ·01	16·838	·209	+ ·001	16	9·77	5627
1166	8·1	Lacaille 8738.........	21 48 41·10	...	+16·730	− 4·687	...	−86 57 47·59	...	+16·845	+1·315	...	41 : 49	11·45 : 10·78	...
1167	4·6	Indi....................δ	51 6·964	− ·055	4·1143	·0660	+·0064	−55 28 4·87	+ ·20	16·936	·313	− ·024	19 : 21	8·59 : 8·46	5635
1168	6·6	Mayer 939	53 9·258	− ·009	3·3523	·0160	+·0010	−21 39 36·37	+ ·03	17·050	·250	− ·004	19	8·53	5645
1169	4·9	Indi....................ε	55 47·009	−4·206	4·6243	·0763	+·4818	−57 12 10·11	+22·13	14·579	·387	−2·591	18 : 21	8·73 : 8·54	5654
1170	5·9	28 Aquarii	55 58·038	− ·001	3·0709	− ·0038	+·0001	+ 0 7 28·09	+ ·06	17·176	·223	− ·006	18	9·25	5655
1171	5·8	20 Pegasi	21 56 13·068	− ·033	+ 2·9218	+ ·0014	+·0036	+12 38 26·39	+ ·51	+17·137	+ ·212	− ·056	19	9·14	5658
1172	4·7	31 Aquarii ....ο	21 58 8·554	− ·008	3·1045	− ·0050	+·0009	− 2 38 17·86	+ ·10	17·268	·222	− ·011	18	9·24	5663
1173	4·6	Gruis...................λ	22 0 5·407	+ ·023	3·6304	·0335	−·0028	−40 1 34·29	+ 1·00	17·245	·257	− ·120	20	8·34	5672
1174	5·1	22 Pegasi ....ν	0 38·272	− ·068	3·0265	·0018	+·0073	+ 4 34 11·61	− ·86	17·481	·213	+ ·092	17	9·37	5674
1175	2·9	34 Aquarii ....α	0 38·930	− ·009	3·0826	·0041	+·0009	− 0 48 20·84	+ ·06	17·383	·216	− ·006	21 : 24	9·51	5676
1176	4·4	33 Aquarii...............ι	22 1 2·297	− ·025	+ 3·2445	− ·0112	+·0025	−14 21 18·19	+ ·60	+17·346	+ ·228	− ·060	17 : 18	9·97 : 10·00	5680
1177	1·7	Gruis ....α	1 56·115	− ·112	3·8011	− ·0455	+·0116	−47 26 44·06	+ 1·56	17·283	·266	− ·162	17 : 18	9·62	5684
1178	3·9	24 Pegasi.................ι	2 21·481	− ·193	2·7903	+ ·0063	+·0220	+24 51 23·94	− ·16	17·481	·194	+ ·018	18	8·78	5688
1179	4·6	14 Piscis Aust..........μ	2 33·127	− ·051	3·5114	− ·0260	+·0057	−33 28 35·73	+ ·36	17·432	·244	− ·040	19 : 18	8·96 : 9·01	5689
1180	5·8	27 Pegasi..................	4 47·664	+ ·038	2·6547	+ ·0088	−·0045	+32 41 0·95	+ ·60	17·495	·179	− ·072	19	8·34	5701
1181	3·7	26 Pegasi ....θ	22 5 9·526	− ·175	+ 3·0266	− ·0011	+·0184	+ 5 42 21·25	− ·31	+17·616	+ ·206	+ ·034	18 : 20	9·50 : 9·20	5703
1182	4·3	29 Pegasi................π	5 32·692	+ ·009	2·6606	+ ·0089	−·0010	+32 41 14·61	+ ·21	17·575	·178	− ·023	17	9·24	5709
1183	6·5	28 Pegasi...	5 46·564	+ ·020	2·8316	+ ·0048	−·0021	+20 29 11·13	+ ·12	17·595	·190	− ·013	17 : 18	9·49	5710
1184	6·7	Lacaille 9061.........	8 32·555	− ·413	3·6809	− ·0359	+·0489	−41 51 26·24	+ 6·65	16·940	·247	− ·782	20 : 21	8·44 : 8·51	5725
1185	5·5	16 Piscis Aust..........λ	8 38·797	− ·015	3·4097	·0210	+·0018	−28 15 45·40	+ ·03	17·724	·225	− ·003	18 : 20	8·36 : 8·42	5726
1186	4·9	Gruis ....μ¹	22 9 35·615	− ·039	+ 3·6311	− ·0361	+·0043	−41 50 39·01	− ·28	+17·796	+ ·238	+ ·031	18 : 19	9·11 : 9·00	5733
1187	4·4	43 Aquarii...............θ	11 33·551	− ·074	3·1684	·0075	+·0074	− 8 16 52·87	+ ·19	17·825	·203	− ·019	21 : 16	9·95 : 9·77	5744
1188	2·9	Toucani..............α	11 39·125	+ ·108	4·1482	·0845	−·0111	−60 45 29·19	+ ·30	17·817	·267	− ·031	16 : 18	9·75 : 9·74	5747
1189	5·6	Lacaille 9076.........	11 42·828	− ·434	3·9588	·0605	+·0459	−54 6 37·58	+ 6·44	17·169	·258	− ·681	16	9·46	5748
1190	6·0	Octantis (C.).........ν	12 34·83	+ ·46	12·836	3·200	−·040	−86 28 33·33	− ·60	17·952	·835	+ ·067	63 : 168	11·45 : 8·97	5750
1191	5·5	46 Aquarii...............ρ	22 14 56·291	− ·006	+ 3·1595	− ·0075	+·0006	− 8 19 24·19	+ ·05	+17·972	+ ·196	− ·005	16	9·23	5755
1192	5·6	Indi.....................ν	16 5·058	−2·897	5·2441	·2075	+·2865	−72 44 36·44	+ 6·97	17·325	·348	− ·694	15 : 16	10·11 : 10·05	5758
1193	5·4	47 Aquarii................	16 5·377	+ ·013	3·3086	·0159	−·0014	−22 5 58·89	+ ·80	17·934	·204	− ·087	18	9·17	5759
1194	3·9	48 Aquarii..............γ	16 29·601	− ·073	3·0998	− ·0041	+·0082	− 1 53 28·64	− ·08	18·046	·190	+ ·009	17 : 19	8·95 : 8·90	5761
1195	5·1	31 Pegasi	16 35·733	− ·003	2·9519	+ ·0019	+·0003	+11 42 4·82	− ·05	18·046	·180	+ ·005	16 : 17	9·82 : 9·61	5762
1196	4·9	32 Pegasi	22 16 42·275	− ·004	+ 2·7654	+ ·0083	+·0004	+27 49 36·47	+ ·02	+18·043	+ ·168	− ·002	16	10·38	5763
1197†	6·0	Gruis...........br. π²	16 59·765	− ·215	3·7051	− ·0433	+·0223	−46 25 54·50	+ ·57	17·995	·228	− ·061	16 : 18	9·63 : 9·41	5765
1198	4·6	52 Aquarii..............π	20 10·254	− ·006	3·0645	·0027	+·0007	+ 0 52 11·33	− ·03	18·178	·181	+ ·003	19	9·24	5777
1199	5·7	Gruis.......... ....ν	22 47·693	− ·034	3·5320	·0324	+·0040	−39 38 17·34	+ 1·43	18·101	·204	− ·170	20	8·44	5789
1200	4·1	Gruis..................δ¹	23 17·715	− ·020	3·6034	·0386	+·0024	−44 0 23·25	− ·01	18·289	·207	+ ·001	20	8·37	5791

1157. 4·7, 5·4; very close binary.
1197. 6·0, 12·5 4″·7 208° 1900·8.

No.	Mag.	Name.	Mean R.A. 1900·0.	$\mu_\alpha\Delta E$.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	Mean Dec. 1900·0.	$\mu_\delta\Delta E$.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	No. of Obs.	Epoch 1900+.	Boss No.
			h m s	s	s	s	s	° ′ ″	″	″	″	″			
1201	4·9	57 Aquarii ……………σ	22 25 21·377	·000	+ 3·1784	− ·0087	·0000	−11 11 23·42	+ ·29	+18·332	+ ·178	− ·030	21 : 18	9·86 : 9·65	5803
1202	5·6	38 Pegasi ………………	25 27·327	− ·024	2·7392	+ ·0107	+·0025	+32 3 38·57	+ ·15	18·349	·152	− ·016	16	9·50	5806
1203	4·4	17 Piscis Aust.………β	25 49·343	− ·043	3·4218	− ·0247	+·0046	−32 51 32·06	+ ·17	18·360	·192	− ·018	16	9·34	5808
1204	5·2	Toucani ……………ν	26 14·621	− ·023	4·0961	·0909	+·0027	−62 29 44·94	+ ·30	18·359	·230	− ·034	22	8·70	5811
1205	5·5	59 Aquarii ……………υ	29 13·639	− ·129	3·2880	·0150	+·0155	−21 13 15·03	+ 1·23	18·347	·178	− ·148	20	8·31	5819
1206	4·1	62 Aquarii …… ……η	22 30 13·167	− ·053	+ 3·0840	− ·0030	+·0060	− 0 37 59·25	+ ·46	+18·474	+ ·164	− ·054	25 : 26	8·88 : 8·58	5824
1207	6·5	Lacaille 9181………	30 39·044	− ·025	3·5182	·0339	+·0028	−41 5 55·42	+ ·77	18·458	·187	− ·085	18	9·08	5828
1208	5·4	63 Aquarii ……………κ	32 34·646	+ ·048	3·1084	·0050	−·0052	− 4 44 39·28	+ 1·07	18·491	·160	− ·115	16	9·30	5835
1209	5·8	Lacaille 9197………	33 12·569	− ·007	3·4014	·0251	+·0008	−33 36 6·14	− ·32	18·664	·175	+ ·038	20	8·37	5836
1210	4·2	18 Piscis Aust.………ε	35 7·601	− ·017	3·3266	·0196	+·0018	−27 33 54·58	+ ·02	18·686	·168	− ·002	16	9·47	5849
1211	4·3	Octantis……………β	22 35 50·91	+ ·34	+ 6·4158	− ·6245	−·0300	−81 54 20·84	− ·06	+18·716	+ ·326	+ ·005	29 : 31	11·49 : 11·48	5850
1212	3·5	42 Pegasi ……………ζ	36 28·522	− ·051	2·9909	+ ·0024	+·0052	+10 18 33·13	+ ·12	18·718	·148	− ·012	18 : 17	9·86 : 9·82	5853
1213	2·1	Gruis………………β	36 42·046	− ·118	3·6017	− ·0435	+·0125	−47 24 27·08	+ ·20	18·716	·179	− ·021	16	9·40	5854
1214	6·8	67 Aquarii ………………	38 1·008	− ·011	3·1349	− ·0062	+·0011	− 7 29 11·41	+ ·20	18·757	·152	− ·021	17	9·55	5863
1215	3·0	44 Pegasi …………… η	38 18·816	− ·007	2·8072	+ ·0110	+·0008	+29 41 53·28	+ ·31	18·752	·135	− ·035	19 : 20	8·84 : 8·80	5865
1216	4·0	47 Pegasi……………λ	22 41 42·842	− ·036	+ 2·8861	+ ·0084	+·0042	+23 2 21·90	+ ·11	+18·875	+ ·133	− ·014	21 : 25	8·62 : 7·92	5875
1217	3·6	Gruis .. ……………ε	42 31·093	− ·096	3·6476	− ·0517	+·0111	−51 50 34·28	+ ·53	18·850	·169	− ·062	19	8·61	5880
1218	4·2	71 Aquarii……………τ	44 17·888	+ ·009	3·1803	− ·0098	−·0011	−14 7 13·84	+ ·30	18·927	·142	− ·036	21	8·28	5884
1219	3·7	48 Pegasi……………μ	45 10·650	− ·097	2·8915	+ ·0092	+·0107	+24 4 24·30	+ ·41	18·943	·127	− ·045	18	9·07	5885
1220	5·6	Lacaille 9275………	45 20·805	− ·025	3·4299	− ·0312	+·0027	−39 41 11·06	+ ·14	18·978	·152	− ·015	18	9·37	5886
1221†	6·4	Lacaille 9268……pr.	22 45 40·647	+ ·013	+ 3·9334	− ·0918	−·0013	−63 43 4·68	+ ·42	+18·959	+ ·174	− ·043	16	9·69	5888
1222†	4·6	22 Piscis Aust.…seq. γ	46 58·095	+ ·022	3·3461	·0242	−·0024	−33 24 21·16	+ ·29	19·006	·145	− ·032	17 : 18	9·27 : 9·13	5893
1223	3·8	73 Aquarii … … ……λ	47 23·916	− ·003	3·1320	·0062	+·0003	− 8 6 42·13	− ·32	19·085	·134	+ ·036	20 : 22	8·97 : 8·88	5895
1224	6·3	Indi………………ρ	47 42·230	+ ·092	4·2404	·1447	−·0099	−70 36 27·09	− ·68	19·131	·183	+ ·073	17	9·30	5898
1225	3·4	76 Aquarii… ……… ..δ	49 20·651	+ ·030	3·1880	·0109	−·0033	−16 21 10·18	+ ·19	19·081	·133	− ·021	21 : 23	9·19 : 9·24	5904
1226	7·2	Gruis…… ………τ^2	22 49 26·382	+ ·207	+ 3·5157	− ·0444	−·0229	−49 1 33·35	− ·45	+19·154	+ ·146	+ ·050	18	9·05	5906
1227†	6·1	Piazzi XXII. 250 m.	49 59·858	− ·011	3·1124	·0047	+·0012	− 5 31 14·56	+ ·03	19·116	·128	− ·003	16	9·29	5909
1228	1·0	24 Piscis Aust.………α	52 7·809	− ·207	3·3239	− ·0211	+·0250	−30 9 9·48	+ 1·34	19·008	·134	− ·166	21 : 24	8·27 : 8·10	5910
1229†	6·0	52 Pegasi…… . …m….	54 11·646	− ·016	2·9991	+ ·0038	+·0017	+11 11 38·84	+ ·39	19·185	·116	− ·041	19 : 20	9·40	5922
1230	4·1	Gruis ……………ζ	54 58·613	+ ·061	3·5667	− ·0527	−·0074	−53 17 25·58	+ ·04	19·241	·137	− ·005	24	8·18	5926
1231	5·7	Lacaille 9337………	22 58 15·855	− ·022	+ 4·0190	− ·1256	+·0024	−69 21 38·85	− ·73	+19·404	+ ·148	+ ·080	18 : 19	9·15 : 9·16	5937
1232	4·5	4 Piscium…… ……β	58 47·293	− ·007	3·0528	+ ·0002	+·0007	+ 3 16 53·61	+ ·08	19·328	·109	− ·008	16	9·41	5939
1233	var.	53 Pegasi…… ……β	58 55·659	− ·141	2·9032	·0119	+·0144	+27 32 26·59	− 1·30	19·472	·104	+ ·133	16	9·76	5940
1234	2·6	54 Pegasi…. .. ……α	22 59 46·807	− ·041	2·9855	+ ·0058	+·0040	+14 40 1·20	+ ·46	19·314	·105	− ·045	17 : 16	10·19	5944
1235†	4·4	Gruis…………pr. θ	23 1 14·820	+ ·040	3·3960	− ·0353	−·0043	−44 3 37·45	+ ·32	19·358	·117	− ·034	18 : 19	9·39 : 9·41	5949
1236	4·7	86 Aquarii… . . ……c^1	23 1 18·664	− ·044	+ 3·2301	− ·0158	+·0050	−24 17 0·44	·00	+19·393	+ ·111	·000	18 : 19	8·77 : 8·72	5950
1237	4·8	55 Pegasi………… ….	1 58·020	− ·005	3·0206	+ ·0031	+·0005	+ 8 52 9·31	+ ·13	19·394	·102	− ·014	16	9·36	5952
1238	5·7	5 Piscium …………A	3 33·713	− ·085	3·0724	− ·0005	+·0091	+ 1 35 1·09	− 1·03	19·552	·101	+ ·110	16	9·34	5959
1239	3·8	88 Aquarii . …………c^2	4 7·000	− ·028	3·2041	·0138	+·0033	−21 42 54·45	− ·30	19·491	·105	+ ·037	35 : 29	8·57 : 8·19	5960
1240	4·0	Gruis…… .. ……ι	4 42·126	− ·119	3·4138	− ·0376	+·0132	−45 47 18·22	+ ·36	19·426	·111	− ·040	19	9·02	5965
1241	5·3	59 Pegasi ………………	23 6 41·235	+ ·010	+ 3·0270	+ ·0030	−·0011	+ 8 10 37·24	+ ·06	+19·501	+ ·094	− ·006	19	9·29	5973
1242	4·4	90 Aquarii……… …φ	9 8·673	− ·017	3·1081	− ·0043	+·0018	− 6 35 19·19	+ 1·74	19·364	·092	− ·191	16 : 17	9·28 : 9·13	5978
1243	6·1	Lacaille 9407 ………	9 25·993	− ·074	3·3416	·0314	+·0091	−41 38 50·63	+ ·98	19·441	·099	− ·120	21	8·15	5979
1244	4·4	91 Aquarii………… ψ^1	10 39·421	− ·237	3·1456	·0060	+·0248	− 9 37 57·68	+ ·12	19·571	·090	− ·013	16 : 17	9·57 : 9·56	5981
1245	5·8	Lacaille 9412 ………	10 57·276	− ·231	3·6435	·0781	+·0248	−62 32 46·53	+ ·33	19·555	·105	− ·035	18	9·31	5983
1246	4·1	Toucani……… …γ	23 11 35·679	+ ·046	+ 3·5299	− ·0636	−·0048	−58 47 1·34	− ·77	+19·682	+ ·099	+ ·081	17	9·50	5985
1247	3·8	6 Piscium…… ……γ	11 59·382	− ·488	3·1093	+ ·0007	+·0502	+ 2 44 9·15	− ·18	19·627	·088	+ ·019	17	9·72	5988
1248	5·7	Octantis … . ……τ	13 10·12	− ·17	10·979	− 5·236	+·015	−88 1 52·85	− ·12	19·643	·317	+ ·013	56 : 162	11·51 : 8·93	5994
1249	4·5	Sculptoris…. .. ..γ	13 25·587	− ·019	3·2500	·0220	+·0020	−33 4 36·98	+ ·61	19·568	·088	− ·066	17	9·25	5995
1250†	5·2	95 Aquarii………seq. ψ^3	13 45·658	− ·031	3·1235	− ·0061	+·0032	−10 9 26·95	− ·02	19·642	·083	+ ·002	19	9·65	5997

1221. 6·5, 9·5 1″·2 20° 1900·8.
1222. 4·6, 8·8 4″·1 268° 1900·8.
1227. 6·3, 8·3 0″·8 325° 1899·8.
1229. 6·2, 7·7 ; close binary.

1233. L, 2·2–2·7 ; P, irregular.
1235. 4·4, 8·2 2″·1 30° 1906·7.
1250. 5·2, 11·5 1″·2 197° 1905·7.

No.	Mag.	Name.	Mean R.A. 1900·0.	$\mu_\alpha\Delta$E.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	Mean Dec. 1900·0.	$\mu_\delta\Delta$E.	Annual Variation 1900·0.	Sec. Var. 1900·0.	Proper Motion.	No. of Obs.	Epoch 1900+.	Boss No.
			h m s	s	s	s	s	° ′ ″	″	″	″	″			
1251	4·6	62 Pegasi ......τ	23 15 41·217	− ·020	+ 2·9643	+ ·0111	+ ·0020	+23 11 34·71	+ ·20	+19·652	+ ·075	− ·021	16	9·75	6005
1252	6·0	Lacaille 9448	15 55·880	+ ·019	3·2034	− ·0172	− ·0021	−27 32 3·69	+ ·41	19·631	·081	− ·046	18	8·93	6007
1253	4·2	98 Aquarii ......b^1	17 43·100	+ ·074	3·1560	− ·0122	− ·0087	−20 38 48·23	+ ·77	19·614	·076	− ·093	23 : 22	8·45 : 8·33	6012
1254	4·6	68 Pegasi ......υ	20 23·354	− ·115	2·9892	+ ·0114	+ ·0137	+22 51 13·26	− ·23	19·776	·067	+ ·028	21	8·36	6024
1255	5·7	Gruis ......o	21 0·932	− ·012	3·3770	− ·0478	+ ·0014	−53 16 29·23	− 1·00	19·875	·075	+ ·117	19	8·57	6027
1256	6·6	Lacaille 9476	23 21 36·417	− ·019	+ 3·3467	− ·0428	+ ·0020	−50 42 27·49	+ ·12	+19·753	+ ·073	− ·013	16 : 17	9·46 : 9·30	6030
1257	5·0	8 Piscium ......κ	21 48·449	− ·059	3·0753	+ ·0001	+ ·0057	+ 0 42 28·14	+ ·90	19·679	·066	− ·090	17 : 16	10·27 : 9·96	6031
1258	4·5	10 Piscium ......θ	22 53·653	+ ·086	3·0415	+ ·0028	− ·0088	+ 5 49 46·24	+ ·42	19·742	·063	− ·043	16	9·80	6037
1259	5·8	Lacaille 9483	23 13·790	− ·037	3·5080	− ·0768	+ ·0044	−63 39 40·09	·00	19·789	·073	·000	20 : 22	8·48 : 8·33	6039
1260	4·7	70 Pegasi	24 5·864	− ·034	3·0310	+ ·0061	+ ·0038	+12 12 32·34	− ·24	19·828	·061	+ ·027	19 : 21	8·84 : 8·81	6040
1261	6·0	Lacaille 9494	23 26 52·244	− ·025	+ 3·9765	− ·2200	+ ·0032	−77 56 15·16	+ ·04	+19·833	+ ·075	− ·005	44 : 45	7·89 : 7·91	6052
1262	4·6	Sculptoris ......β	27 36·708	− ·066	3·2291	·0258	+ ·0077	−38 22 16·36	− ·09	19·[illegible]58	·058	+ ·011	20 : 21	8·58 : 8·53	6054
1263	4·7	101 Aquarii ......b^3	28 2·686	+ ·005	3·1449	− ·0121	− ·0005	−21 28 1·93	− ·16	19·869	·055	+ ·017	17	9·42	6057
1264†	5·2	72 Pegasi ......m...	28 59·473	− ·038	2·9690	+ ·0166	+ ·0040	+30 46 24·09	+ ·11	19·852	·050	− ·012	17 : 18	9·53 : 9·38	6059
1265	6·2	14 Piscium	29 0·605	− ·069	3·0851	− ·0008	− ·0071	− 1 47 59·55	+ ·09	19·855	·052	− ·009	16	9·67	6060
1266	4·8	Phœnicis ......ι	23 29 41·943	− ·019	+ 3·2399	− ·0307	+ ·0023	−43 10 4·86	+ ·07	+19·863	+ ·054	− ·009	19 : 20	8·38 : 8·32	6062
1267	7·9	Lacaille 9464	29 47·08	...	6·371	1·750	...	−86 57 6·05	...	19·873	·114	...	30 : 54	11·50 : 9·62	...
1268	6·7	Mayer 1003	30 22·580	+ ·006	3·0960	·0040	− ·0006	− 8 1 4·40	− ·19	19·900	·050	+ ·020	17	9·37	6065
1269	4·9	Lacaille 9535	32 28·158	− ·049	3·2447	− ·0339	+ ·0062	−46 2 44·42	+ ·19	19·878	·048	− ·024	26	7·86	6068
1270	4·2	17 Piscium ......ι	34 48·607	− ·208	3·0841	+ ·0032	+ ·0248	+ 5 5 0·03	+ 3·62	19·487	·041	− ·439	22 : 19	8·38 : 8·24	6077
1271	5·5	Sculptoris ......μ	23 35 23·333	+ ·072	+ 3·1558	− ·0196	− ·0082	−32 37 34·01	+ ·33	+19·893	+ ·041	− ·038	19	8·79	6079
1272	4·7	18 Piscium ......λ	36 56·551	+ ·086	3·0603	+ ·0012	− ·0092	+ 1 13 45·50	+ 1·34	19·801	·036	− ·144	16	9·33	6084
1273†	4·7	105 Aquarii ......pr. ω^2	37 32·296	− ·053	3·1136	− ·0077	+ ·0060	−15 5 52·86	+ ·52	19·891	·036	− ·060	28 : 25	8·88 : 8·68	6087
1274	6·3	Lacaille 9566	38 42·772	− ·428	3·4818	·1092	+ ·0484	−71 2 48·94	− ·57	20·025	·040	+ ·065	20 : 21	8·84 : 8·72	6093
1275	5·4	106 Aquarii ......i^1	39 0·946	− ·019	3·1160	·0098	+ ·0020	−18 49 55·27	·00	19·963	·033	·000	16	9·42	6095
1276	7·9	Lacaille 9563	23 41 0·39	...	+ 4·204	− ·529	...	−84 25 5·00	...	+19·978	+ ·042	...	30 : 55	11·51 : 9·82	...
1277	5·6	19 Piscium	41 16·889	+ ·032	3·0634	+ ·0023	− ·0034	+ 2 55 55·05	+ ·19	19·960	·028	− ·020	16	9·33	6102
1278	5·4	Phœnicis ......σ	41 57·675	+ ·019	3·1989	− ·0387	− ·0022	−50 46 53·53	+ ·10	19·973	·028	− ·012	21 : 23	8·65 : 8·42	6103
1279†	4·7	Sculptoris ......seq. δ	43 43·176	− ·066	3·1322	·0160	+ ·0080	−28 41 0·58	+ ·83	19·895	·024	− ·101	22	8·23	6110
1280	7·9	Lacaille 9596	46 10·18	...	4·372	− ·887	...	−86 27 8·25	...	20·010	·030	...	35 : 59	11·54 : 10·07	...
1281	5·5	81 Pegasi ......φ	23 47 23·989	+ ·010	+ 3·0466	+ ·0110	− ·0011	+18 33 53·85	+ ·38	+19·973	+ ·016	− ·044	21	8·74	6127
1282	6·5	25 Piscium	47 57·477	− ·007	3·0713	+ ·0020	+ ·0008	+ 1 32 4·18	+ ·06	20·013	·015	− ·006	16	9·33	6133
1283	6·5	Lacaille 9633	48 10·694	− ·028	3·1074	− ·0129	+ ·0032	−24 47 7·49	+ ·01	20·019	·015	− ·001	21 : 23	8·64 : 8·67	6134
1284	5·9	Octantis ......γ^2	52 4	...	3·4164	− ·2848	− ·0184	−82 43 33·31	+ ·12	20·019	·009	− ·016	8	7·42	6146
1285	4·8	84 Pegasi ......ψ	52 39·688	+ ·029	3·0497	+ ·0149	− ·0031	+24 35 8·03	+ ·35	20·000	·006	− ·037	16	9·38	6150
1286†	5·2	27 Piscium ......seq.	23 53 33·211	+ ·036	+ 3·0712	− ·0007	− ·0038	− 4 6 39·67	+ ·64	+19·972	+ ·004	− ·067	16	9·49	6153
1287	5·2	Phœnicis ......π	53 45·021	− ·044	3·1263	− ·0400	+ ·0051	−53 18 15·27	− ·46	20·093	·004	+ ·054	21 : 22	8·53 : 8·50	6154
1288	4·1	28 Piscium ......ω	54 10·646	− ·091	3·0787	+ ·0048	+ ·0101	+ 6 18 33·85	+ ·95	19·931	·003	− ·109	21 : 26	9·05 : 8·76	6156
1289	4·6	Toucani ......ε	54 43·395	− ·063	3·1486	− ·0693	+ ·0067	−66 8 0·40	+ ·22	20·018	+ ·002	− ·024	17	9·35	6160
1290	4·9	Octantis ......θ	56 27·394	+ ·164	3·1449	− ·1407	− ·0215	−77 37 5·02	+ 1·19	19·888	− ·001	− ·156	42 : 45	7·63 : 7·62	6165
1291	4·6	30 Piscium	23 56 49·951	− ·025	+ 3·0772	− ·0018	+ ·0027	− 6 34 11·71	+ ·32	+20·011	− ·002	− ·034	16	9·42	6171
1292	4·6	2 Ceti	58 37·089	− ·013	3·0762	·0079	+ ·0013	−17 53 33·62	+ ·08	20·038	·006	− ·008	15 : 17	9·66 : 9·55	6179
1293	5·8	Lacaille 9710	59 37·149	− ·054	3·0857	·0908	+ ·0065	−71 59 36·34	+ ·12	20·032	·008	− ·015	23 : 24	8·24 : 8·13	6185

1264. 6·0, 6·0 ; very close binary.
1273. 4·7, 10·7 5″·3 84° 1898·7.
1279. 4·7, 11·0 3″·3 230° 1899·7.
1286. 5·2, 11 1″·8 270° 1899·8.